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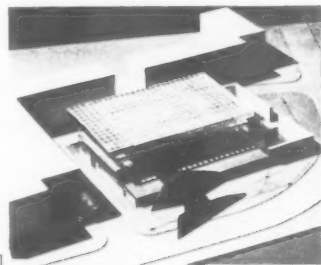
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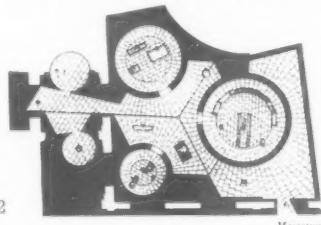
New Museums

UNESCO's quarterly *Museum* (Vol. IX, No. 2, 1956)* provides a useful survey of the most forward-looking museum buildings currently building or recently projected. Apart from those that have been dealt with in *THE ARCHITECTURAL REVIEW* already—the *Arts et Traditions Populaires*, Paris (AR, July, 1956), Museum of Modern Art, Rio de Janeiro (May, 1954) and Yale (December, 1955)—this issue also describes or illustrates the rehabilitation of the Villa Giulia, Rome, the proposed new museum at Le Havre, by Lagneau and Audigier, with its giant sunscreen overhead, 1, and



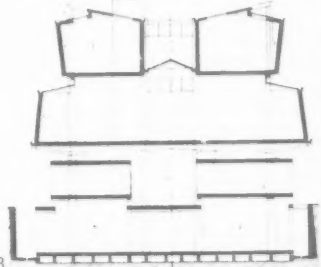
Museum

two of the most exciting new Italian projects. One is exciting for its plan, the other for its sections. Plan-wise, the *Tesoro di San Lorenzo*, Genoa, has been organized by Franco Albini as a series of cylindrical *coffre-forts*, 2, in a crypt below the courtyard of the Archbishop's Palace



Museum

the only piece of free ground that could effectively be linked to the sacristy in such a way that the treasures could conveniently be taken up to the Cathedral for ceremonial use. In the sections of the new Gallery of Modern Art, Turin, the architects, Bassi and Boschetti, have exploited the difficulties of top-lighting superimposed galleries to give a profile, 3, that one might well



Museum

be tempted to dismiss as Neo-expressionist did it not manifestly promise excellent performance under

* HMSO price 5s.

difficult conditions. Their design, crammed diagonally into a site that is barely large enough to accept it, is a masterpiece of ingenuity and was the product of a competition held in 1951.

Brussels Exhibition

Though nothing has yet been announced about the design of the British Government Pavilion at the Brussels International Exhibition, 1958, the FBI have published sketch-plans, etc., of the Industrial Pavilion. This will, in fact, be a group of buildings, 4, the main block consisting of pavilion proper, designed by Edward D. Mills, a three-storey steel framed structure with tubular lattice-truss roof, walled in patent glazing and light cladding. Annexed to this at one end will be a cinema, and at



4

the other end a part-covered piazza with shops and apparently a reproduction of a council-estate type pub ('contemporary in style but employing traditional materials,' etc., according to one source). One hopes that this particular piece of half-heartedness will be reconsidered before the design proceeds too far. The English penchant for compromise is not an exportable commodity, and in the context of the first International Exhibition since New York, 1939, this piece of brewers' timidity is unlikely to look anything but second-rate. If we must have a pastiche there might be a case for a piece of all-out half-timbering, oak-beaming and copper-bottoming, but there is an even better case for an all-out exercise in the true gin-palace vernacular, with all its glitter and excitement re-phrased in a manner as forthrightly and unashamedly contemporary as the main pavilion.

Royal Dolls' House

Following in a tradition which is also adorned by Sir Edwin Lutyens' famous Royal Dolls' house, James Cubitt and Partners have recently designed a very different miniature dwelling for Princess Anne. Not only is the scale twice as big (one inch to



5



6

the foot) but the style is straightforward contemporary, based upon one of the same office's houses in West Africa, 5. Not only does the larger scale permit the model furniture to be made robust enough to be played with, but the double height hallway living-room facilitates the entry of the hand, and the contemporary idiom, in which the interior economy of the house shows through the screen-like outer walls, permits the removal of one wall for access, 6, without drastically altering the feeling of the elevation.

Glassed-in Stand

Encounters between architecture and sport have not always been happy in England in recent years but to the noble exception of East Molesey cricket pavilion (AR October 1955) can be added now the re-designed stands at Wimbledon Stadium, by Guy Morgan and Partners, 7. The nature of the programme, involving three-hundred feet of glazing with the minimum of visual obstruction, invited boldness of handling and the paring-down of structure to the minimum. As will be seen, the view from the terraced seating is interrupted only by six major stanchions in the entire length, and by the light lattice wind-braces.



7

Adelaide Exhibition

The Australian Architectural Convention has been held, this year, in Adelaide, South Australia, and has been the occasion of an extremely successful exhibition presenting architecture and building techniques to the general public—of whom 100,000 visited it in the three weeks it was open. Its success seems to have been largely due to its presentation in a number of well-designed temporary pavilions in the famous Botanic Park. If the presentation was thus of *Triennale* type, the stands were also capable of comparison with Milan on quality of design. They were, mostly, of the portal-frame type—as in the



8



10

Timber House, 8—or tension structures of various kinds, such as tents—the International Pavilion, 9, with sculpture by Dutkiewicz in the foreground—suspended canopies—like the entrance feature, 10, with its glittering weave of aluminium foil—or unclassifiable—like the Steel Pavilion, 11. Ten architects worked together on a voluntary basis to produce this exhibition, with three sculptors and a mural painter, a remarkably successful example of large-scale teamwork.

CORRESPONDENCE

Historic Churches

To the Editors,

Sirs, It seems to me that Mr. John Betjeman has said the last word on the at present vexed subject of preserving ancient churches; broadly (to summarize his recent remarks in *The Spectator*) that a building put up to the glory of God continues to glorify Him by its very existence; and this, I would add, is especially so if it is architecturally distinguished and even more if its place in the townscape (or the landscape; but rural parishes do not grow 'redundant' so readily) is such as to attract, involuntarily and unconsciously, the eyes of all. This is not to say that a tin chapel in the shadow of a gas-works is not emotive as well; but it is so in a different way, namely, as a proof that God can be glorified as well through the medium of rusty corrugated iron and peeling green paint as by graceful steeples and marble monuments.

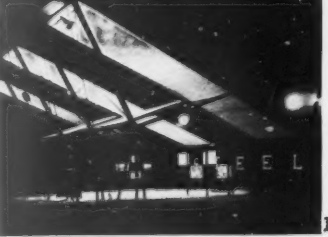
What is certain is that one never thinks of churches as built by man for his own glorification; they bear witness to some forgotten man's gratitude to his creator. One man can only bear such witness during his own life-time; the church he builds can do so until it ceases to exist. Furthermore, a man's devotion fluctuates; a building is always there, day after day and year after year, a reminder that God also is always there. Therefore, it seems that the Church of England is taking a dangerous step, weakening its heritage and gratuitously increasing its own burden, by destroying such monuments. If the beauty, grandeur, simplicity or silence of a church has ever permanently won a soul to God, then any number of 'redundant' ministries is worth having.

Yours, etc.

THOMAS BRADBURY,
London, W.C.2.



9



11

St. Mary's Sandwich

To the Editors,

SIRS.—As many of your readers will know already, the Sandwich P.C.C. has applied for a faculty to demolish the medieval church of St. Mary's, Sandwich. This is in spite of Mr. Ivor Bulmer-Thomas' offer to provide £3,000 towards the cost of preserving it. An Association of Friends of St. Mary's has been formed by local residents with the objects of opposing the P.C.C.'s application and raising the additional funds necessary, and it is now possible that St. Mary's will, therefore, be saved.

The historical and architectural interest of this church alone makes its preservation essential, and from the pastoral point of view it would be imprudent of the Church to do away with a building of such antiquity merely because at the moment it can find no use for it. However, attention has already been drawn to these aspects elsewhere. But there are two points in the case



for St. Mary's which need special emphasis.

(1) Whatever St. Mary's merits as an individual building, it forms a prominent part of the Sandwich 'townscape'—its Norman west wall ends the vista down the sixteenth- and seventeenth-century houses of Church Street. St. Mary's, and, if removed, it would leave an ineradicable scar on the face of the town. This would be tragedy, as Sandwich—once England's first port—is not only an historic town, but one of considerable architectural importance. Few towns can boast so representative and unspoilt a collection of ancient buildings.

(2) In 1913 a Joint Select Committee recommended that ecclesiastical buildings of architectural or historical interest should be made subject to the provisions of the Ancient Monuments Acts. This would have meant (among other things) that preservation orders could have been issued for any buildings which the Church wished to demolish. The recommendation was, however, rejected upon the undertaking of the then Archbishop of Canterbury, that

he would find out what precautions the Church took 'to secure that no harm shall arise to the ecclesiastical buildings whose value is so great,' and, if necessary, to see that extra precautions were taken. This undertaking was taken as a pledge that the Church would look after its ancient buildings.

Since 1913, in fact, few ancient churches have been demolished, and during the last four years, while the policy of the Historic Churches Preservation Trust was to provide funds for the preservation of any church of sufficient interest, irrespective of whether it was, or was not, supposed for the time being to be 'redundant,' no such church has been lost.

But if the faculty to demolish St. Mary's is granted, the Church will very likely feel free to demolish other fine churches (like Holy Trinity, Leeds, and St. Mary-le-Quay, Ipswich), which are temporarily 'redundant.' These losses none of us can afford. To put it simply, it looks as though St. Mary's may be the 'thin end of the wedge,' and for this reason alone every effort must be made to prevent its demolition.

Yours, etc.,

ARTHUR PERCIVAL,
Sandwich, Kent.

Blackheath then and now

To the Editors,

SIRS, Blackheath, S.E.3., has, since the war, suffered considerably from the hands of improvers. Most of the large depressions known as 'the pits,' features which gave character to the flat open space and where the bank holiday fairs used to be situated, have been filled in and replaced with level grass. [See the two photographs below.] Incursions of housing which are reputed temporary only have despoiled opposite ends of the heath. A veritable forest of poles now mars every road across the heath (of which there are too many in any case). Various types of lighting are the principal offenders. The innocent original gas lamps, once quite adequate, have been heightened with curly extensions (artistic?); road names on the Lewisham side have appeared on the end of seven-foot poles, various kinds of notices in addition to crossing signs 'improve' the amenities and, in another vein, rustic benches add their flavour to this welter of industrial objects.

In Blackheath Village, now heavy with traffic, crude iron barriers restrict the pedestrian and destroy the original character—assisted by preservation societies who ensure that buildings in the Vale under reconstruction are made into a polite Georgian as opposed to the original nondescript but honest buildings that were damaged.

Antique shops have appeared in numbers, a phenomenon which like a

preservation society is generally associated with the destruction of a townscape in good faith and under the banner of private or municipal improvement.

Yours, etc.,

TREVOR DANNATT.

Neo-Egyptian

To the Editors

SIRS,—The learned article by Messrs. Peyssner and Lang was most interesting to this fancier who never traced the Egyptian Revival back any further than Bonaparte's expedition.

I enclose a photo of what must be the most Americanized Egyptian Revival building to be found on land or sea. It is the Whalers Presbyterian Church at Sag Harbor on Long



Island (N.Y.), designed by the self-taught architect Minard LaFeyer and built by shipwrights in the eighteenth-forties. I was holding the camera straight, those really are Battered Walls in Frame and Clapboard!

Yours, etc.,

JOHN MAASS.

Philadelphia.

[The photograph above will appear in a book by Mr. Maass on Victorian architecture in the U.S. shortly to be published.]

Intelligence

The regulations and programme of the eleventh *Triennale di Milano*, which will take place in 1957, have been issued by the Triennale office. The exhibition is to have three main themes; the relationship of the arts, contemporary architecture, art-production (handicrafts) and industrial design. Copies of the regulations and other information may be had from: Centro Studi Triennale, Palazzo dell'Arte al Parco, Milan. The British Council and C.O.I.D. have been trying to persuade the Government to participate officially, but it is understood that once again the idea has been rejected.

Messrs. Richard Sheppard and Partners have been appointed architects for the Imperial College expansion scheme in Princes Gardens, Kensington.

Ickworth House, Suffolk, an English eccentric's equivalent of a

Ledoux fantasy, has been acquired by the National Trust from the Hervey family.

The Public Relations Committee of the RIBA is organizing a touring exhibition on the problem of Subtopia, based on the ARCHITECTURAL REVIEW's 'Outrage' issue, and arranged by Gordon Bowyer. The exhibition is expected to be on the road early in the New Year.



Cecil H. Elsom, architect of the offices in Bruton Street, W.1. (see pages 227-8) was born in 1912, went to Northern Polytechnic Evening School of Architecture, and qualified in 1939. Started practice in 1934, after winning competition for Town Hall, Welwyn Garden City; partner in firm of Lyons, Israel and Elsom 1935-1939. Royal Engineers, England and India, 1940-1946. Re-commenced practice 1946. Post-war work includes London office blocks, chain stores, television studios, agricultural housing, factories and cinemas.

ACKNOWLEDGMENTS

The colour block on page 252 (the Library at Rangoon) appears by courtesy of Raglan Squire and Partners.

MARGINALIA, pages 211-212: 7, Studio Cole; 8-11, Arnold Ltd. FISCHER VON ERLACH, pages 215-217: 3, Warburg Inst. (H. Gernsheim); WEST END OFFICES, pages 218-226: 1-4, 6-10, McCallum, Arphot; 11, 12, L. Collier and Partners; 13, 14, 16, Galwey, Arphot; 15, Colin Westwood; 18, John McCann; 19, 20, 24, Marcus Sharratt; 21, S. W. Newbery; 23, John Maltby; 28, Colin Tait. Pages 227-233: Albert Embankment, 1-3, 6, Wainwright; 4, 5, Galwey, Bruton Street and New Cavendish Street, C. Westwood. REPORT FROM CALIFORNIA, pages 237-239: 1, 2, Walter Horn; 3, 6, John B. Vincent; 4, Ernest Braun; 5, Rondal Partridge; 8, 9, 10, Morley Baer; 11, Eddie Hoff. ALPHABET AND IMAGE, pages 240-7: 3, Fedn. Nationale des Fabricants de Chaux et Ciments; 7, McCallum; 18, I. de Wolfe, Arphot; 19, Reece Winstone; 21, Div. of Highways, California. STORE AT SOUTHAMPTON, pages 249-251: Galwey, LIBRARY AT RANGOON, colour photo, page 252: Michael Boys. CURRENT ARCHITECTURE, pages 255-258: Turnhouse Airport, Toomey, Arphot; House at Mereworth, Norman Gold. MISCELLANY, pages 259-264: Piece Hall, Town Clerk's Office, Halifax: Exhibitions, 5, R. B. Fleming; Outrage, Nairn, Arphot; Books, G. E. Kidders-Smith. SKILL, pages 265-end: Restaurant in Helsinki, Kolmio; Restaurant in Old Brompton Road, 3, 4, Galwey; rest, R. A. Morton. Design Review: 1, Fyans; 2, Hiller & Swatton; 3, Larkin Bros.; 6, Collier Ltd.; 7, Thorn Electrical.

Below left, Blackheath Fair (on August Bank Holiday) before the undulations were filled in; right, close to the same site today. See letter 'Blackheath then and now.'



THE ARCHITECTURAL REVIEW

Volume 120 Number 717 October 1956



This Month's Cover assembles some of the elements of a proposed code of clear and comprehensible visual symbols, that could replace the present muddle of variously-lettered, insensitively-designed notices that distract the traveller from the pleasure and business of travelling without always communicating to him the intended warning or information. The subject is further discussed on pp. 240-247, where Gordon Cullen extends the possible range of non-alphabetical signals for an automotive age to include plastic and topographical symbols as well.

211 **Marginalia**

211 **Correspondence**

214 **Frontispiece**

215 **Fischer von Erlach by Nikolaus Pevsner** The influence of Fischer von Erlach, the tercentenary of whose birth falls this year, depended very little upon his buildings, very much upon his book *Historische Architektur*. Published in Vienna in five volumes in 1721, it was the first general and pictorial history of architecture to appear, not restricted to the buildings of a particular locality nor to the propagation of a particular style, but intended to show the variety of world architecture from Stonehenge to China, from Solomon to von Erlach. In this commemorative article Professor Pevsner considers the historical importance of the book and its illustrations, its translation into English, its reception and curiously scattered influence in the world of eighteenth century English architecture.

218 **West End Offices by Ian McCallum** The rebuilding of the City of London is already the subject of extensive discussion and polemic, but the piecemeal reconstruction of the rest of the Central London area has so far gone without comment. This is in part due to the fact that it has only recently got under way, and partly to the scattered nature of the developments. Nevertheless, office developments in the West End now constitute a large part of the building work in hand in London, and the situation requires some study. Mr. McCallum draws attention to the special problems of design that separate the architect working in the City from one working in the West End. The

buildings in the West End have usually to be fitted into narrow and isolated sites, and there are few opportunities at present for large-scale designs. As façades, these buildings will either be seen at close range from pavement level—that is, as ground floors only—or in raking views from the opposite side of the street with their ground-floors masked by traffic. Very few designs seem even to recognize the existence of this problem, any more than most of them have really made an attempt to grapple with the visual problems arising from window and office-planning modules. In taking his discussion of these points from the general to the particular, Mr. McCallum is able to cite the cases of no fewer than 24 recently-designed buildings, but these represent only the most interesting examples out of a much larger field of activity, as may be judged from the map which forms the frontispiece to the article.

227 **Offices on Albert Embankment: Architect, Frederick Gibberd**

229 **Offices in Bruton Street: Architect, Cecil H. Elsom**

230 **Offices in Victoria Street: Architects, Sir John Burnet, Tait and Partners**

232 **Offices in New Cavendish Street: Architects, Gollins, Melvin and Ward**

234 **Choisy by Julius Posener** Among the important, but already half-forgotten, books that helped to form the climate of opinion in which Modern Architecture grew up, the *History of Architecture* of Auguste Choisy holds a special place. It remains only half-forgotten because it is still used as a work of reference, and because succeeding generations have pillaged its splendid illustrations for their own ends, but even those who accept its major premises as almost maxims, rarely read it nowadays. Choisy was one of the last and greatest of the French nineteenth-century Rationalists, for whom logic and technique were the guiding lights of architectural development throughout history, for whom a question, once posed, indicated its own solution. Neither the value, nor the historical importance of this attitude—nor, indeed, of Choisy's book—have been fully discussed before, and Dr. Posener's study of Choisy as theorist and teacher is a pioneer investigation into the French antecedents of the Modern Movement.

237 **Californian News-letter by James Ackerman** Known to outsiders chiefly as the home of the Bay Region Style and of Charles Eames, California is a rich and varied province of American architecture with its own splendours and miseries—deriving chiefly from newness, vast distances contrasted with an insistence on domestic scale, technology and the automobile. Dr. Ackerman, now resident in California, reports on its architectural appearance and the recent work of local and outside architects in the State, finding that the results of two warring traditions—local for domestic work, European for larger buildings—have been an unhealthy battle of opinions and an architecture that is uncommonly vital.

240 **Alphabet or Image by Gordon Cullen** Whereas other modes of transport have their own codes of signals, symbols, equipment and trim, that give them unity as serial experiences and are proper to the speed of locomotion, the motorized highway presents only visual disorder, discontinuity, obscurity in signalling and a failure to realize that automotive speeds make road travel into an experience that is different in kind, rather than degree, from the experiences of the horse-and-cart epoch. Mr. Cullen presents, by means of both photographs and drawings, the inadequacy of the present code and the modes of thought on which it is based, and suggests ways by which a code of symbolic forms could be evolved that would enhance the efficiency and the safety, the business and the pleasure of travelling by road.

248 **Store at Southampton: Architects, Yorke, Rosenberg and Mardall**

252 **Preview: Library at Rangoon: Architects, Raglan Squire and Partners**

255 **Current Architecture**

Miscellany

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265 **Interiors: Restaurant in Helsinki: Architect, Aarne Ervi**

Restaurant in Old Brompton Road, S.W.7: Designer, Terence Conran

271 **Design Review**

272 **Techniques: Remote Control Gear for Ventilators by Robert Maguire**

274 **The Industry**

276 **Contractors, etc.**

Author: Julius Posener, born Berlin 1904, father a painter. Studied architecture Charlottenburg under Polzig; practised Paris and Berlin, went to France 1933 (editorial office *L'Architecture d'Aujourd'hui*) and Jerusalem 1935, office of Erich Mendelsohn. Volunteered H.M. Forces 1941, in army till 1947. Came to England 1947, taught LCC school of architecture, Brixton, till 1956, when he took charge of new department of architecture, Kuala Lumpur. Recreations: Mozart and gliding.

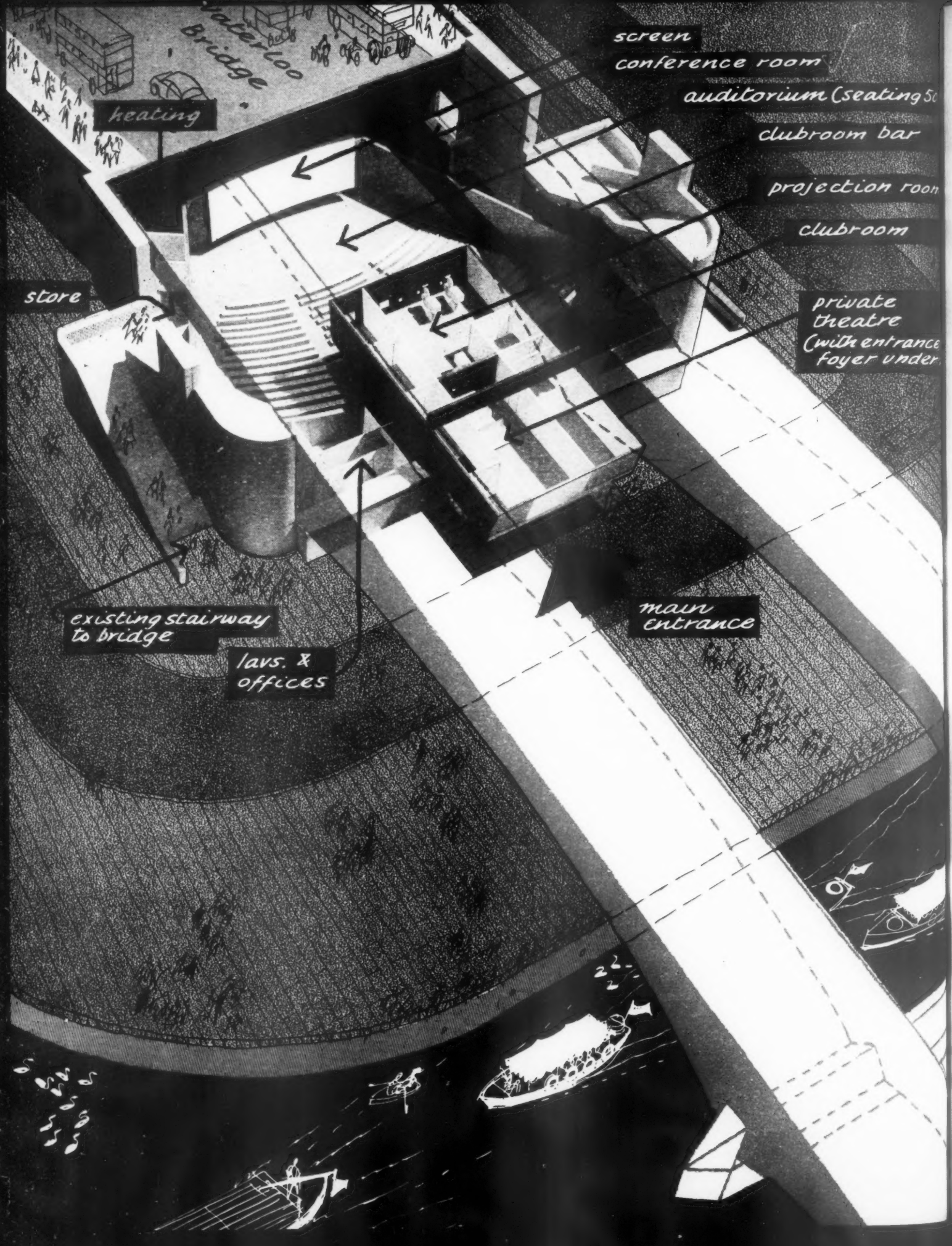
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THE ARCHITECTURAL REVIEW

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FIVE SHILLINGS



Waterloo
Bridge

heating

store

existing stairway
to bridge

lavs. &
offices

screen

conference room

auditorium (seating 500)

clubroom bar

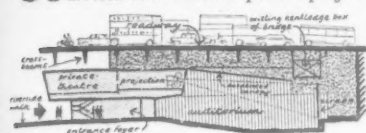
projection room

clubroom

private
theatre
(with entrance
foyer under)

main
entrance

The London County Council's proposal to locate the new National Film Theatre under one of the arch-abutments of Waterloo Bridge involved their Architect's Department, under Dr. J. L. Martin, in a problem calling for considerable ingenuity. Not only do the cross-beams supporting the roadway limit the headroom, as this section shows, but the main box-members of the arches (shown in red on Kenneth Browne's diagram on the facing page) also constrict the width available at the riverward end. The solution arrived at has been to put the projection box and entrance in this



constriction, to allow the auditorium to go almost the full width available under the flights of steps that flank the abutment, and to ceil in the auditorium with a suspended canopy.

Nikolaus Pevsner

FISCHER VON ERLACH

1656-1723

Johann Bernhard Fischer von Erlach was born three hundred years ago at Graz, where his father was a sculptor of no special distinction. The son studied architecture in Rome and in Naples under an Austrian, Schor, who was not a man of special distinction either. He was back in Austria in 1687, settled down in Vienna, taught architecture to the future Emperor Josef I, and seems at once to have been given the title Royal Engineer and Architect. He visited Prague in 1691 and probably again later, and in 1704 he visited Berlin; but he never seems to have been in Paris. In 1705 he was made Surveyor-General of the Emperor's Buildings. He died in 1723.

His principal buildings are familiar, the church of St. Charles with its two Trajan's columns or minarets, the churches at Salzburg, one with a deeply concave, one with a boldly convex façade, the town house of Prince Eugene and the Imperial Library at Vienna, and perhaps also some of the other Viennese palaces. They are all Baroque in the Italo-German sense, but possess an elegance and a discretion absent as a rule in Germany and often in Italy. As against Paris on the other hand Fischer's Vienna seems sprightly and capricious.

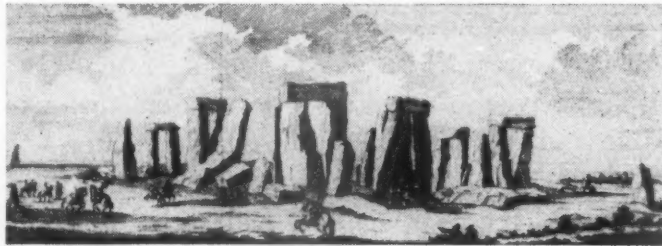
How far his buildings, confined to Vienna, Prague and the Austrian countryside, can have affected foreign architects it is hard to guess. At first sight influence on so distant a country as England seems improbable. But Fischer's fame did not depend on his buildings exclusively; if as an architect he was little known abroad, as an author he certainly enjoyed a considerable reputation. He had begun to work on his *Historische Architektur* about 1705. The manuscript was, it is said, complete by 1712. The first edition came out in Vienna in 1721, the second in Leipzig in 1725. In 1730 Thomas Lediard brought out an English edition of which a second edition was needed in 1737. Lediard was quite a remarkable man. He was secretary to the British envoy at Hamburg, attached for a time to the staff of the Duke of Marlborough and in 1738 'agent and surveyor' of Westminster Bridge. For this he made a design which was not accepted. At Hamburg he managed the opera. He wrote a life of Marlborough, a Naval History of England, an English opera which was performed at the Haymarket Theatre in 1732,

an English grammar in German, and he translated Terrasson's *Sethos*, that oddly Egyptianizing novel, from the French.

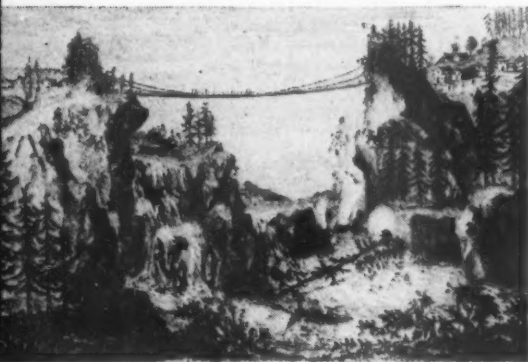
A Plan of Civil and Historical Architecture, as Lediard had called his translation, is the earliest general history of architecture; it is also the earliest pictorial history of architecture. It consists of five books and begins with a map showing the location of the buildings illustrated. The buildings start with the Temple of Solomon (after Villalpandi), move on to the Hanging Gardens of Semiramis, the Pyramids, the Mausoleum of Halicarnassus, the temple of Diana at Ephesus, the Colossus of Rhodes, the Pharos of Alexandria and so on to Books Four and Five, which are of buildings and fantasies by Fischer himself. Prince Eugene, the most famous Viennese of the time, had a statue of himself, crushing an enemy and in vain trying to prevent Fame from trumpeting his glories, made and set up in his own palace. So why should Fischer not have made his own work the crowning achievement of two millennia of architecture?

Fischer must have put much study into the book. He developed his illustrations from many sources, written and pictorial, and mentions a number of them. As an indication of what was known of distant monuments in the early eighteenth century the book is invaluable to the scholar. But its interest is wider than that. He illustrates, though without detail and not reliably, the Parthenon long before Le Roy and Athenian Stuart, Palmyra long before Robert Wood, and Spalato long before Robert Adam. But he also devoted eight plates to Turkey and showed Aia Sophia as well as the Suleimaniye and the Mosque of Sultan Achmed, and he presented to surprised Austrians and Germans Stonehenge, 1, (from Camden's *Britannia*), and a suspension bridge with chains at Kintung in China, 2.

All this no doubt was stimulating as well as entertaining. But its deeper significance lies in the fact that Fischer's is the first book of architectural engravings of a new type, a type which was to flourish in the later eighteenth and the early nineteenth centuries: the pattern book offering a variety of patterns to please a

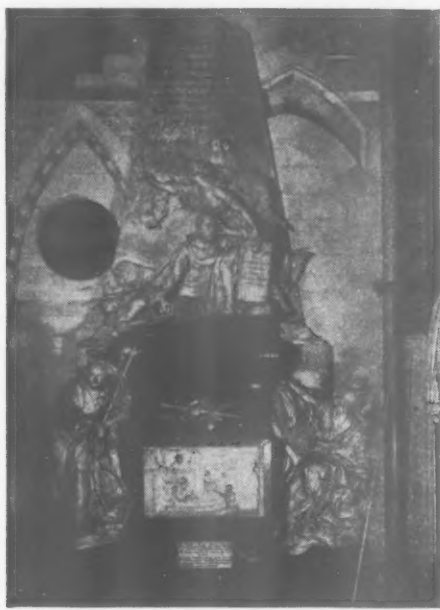


1, Stonehenge; a plate from Book II of Fischer von Erlach's *Historische Architektur*



2, the chain bridge of Kintung, China; Book III of Fischer's book.

variety of tastes. Until then there had been three types of architectural books: the picture book of the buildings of a town, such as Domenico de' Rossi's *'Monuments of Rome'*, or the picture book of the buildings of a country such as Ducerceau's *Plus excellents Bastiments de France*, and the architectural treatise which is implicitly a plea for one particular style or type of style. In this category are the famous compendia of Serlio, Vignola, Palladio, and even, with some reservations, Ducerceau, and so on to Fischer's own day, that is to such books as Paul Decker's *Fürstlicher Baumeister* of 1711 on the Baroque side and to *Vitruvius Britannicus* of 1715 on the classical. Fischer (in Lediard's translation) calls his book an 'Essay in diversify'd Architecture' and says: 'Artists will here see, that Nations dissent no less in their Taste for Architecture, than in Food & Raiment, and, by comparing one with the other, they themselves may make a judicious choice.' It is true that



3, monument to John, 2nd Duke of Argyll. By Roubiliac, in the south transept of Westminster Abbey. Made in 1748.



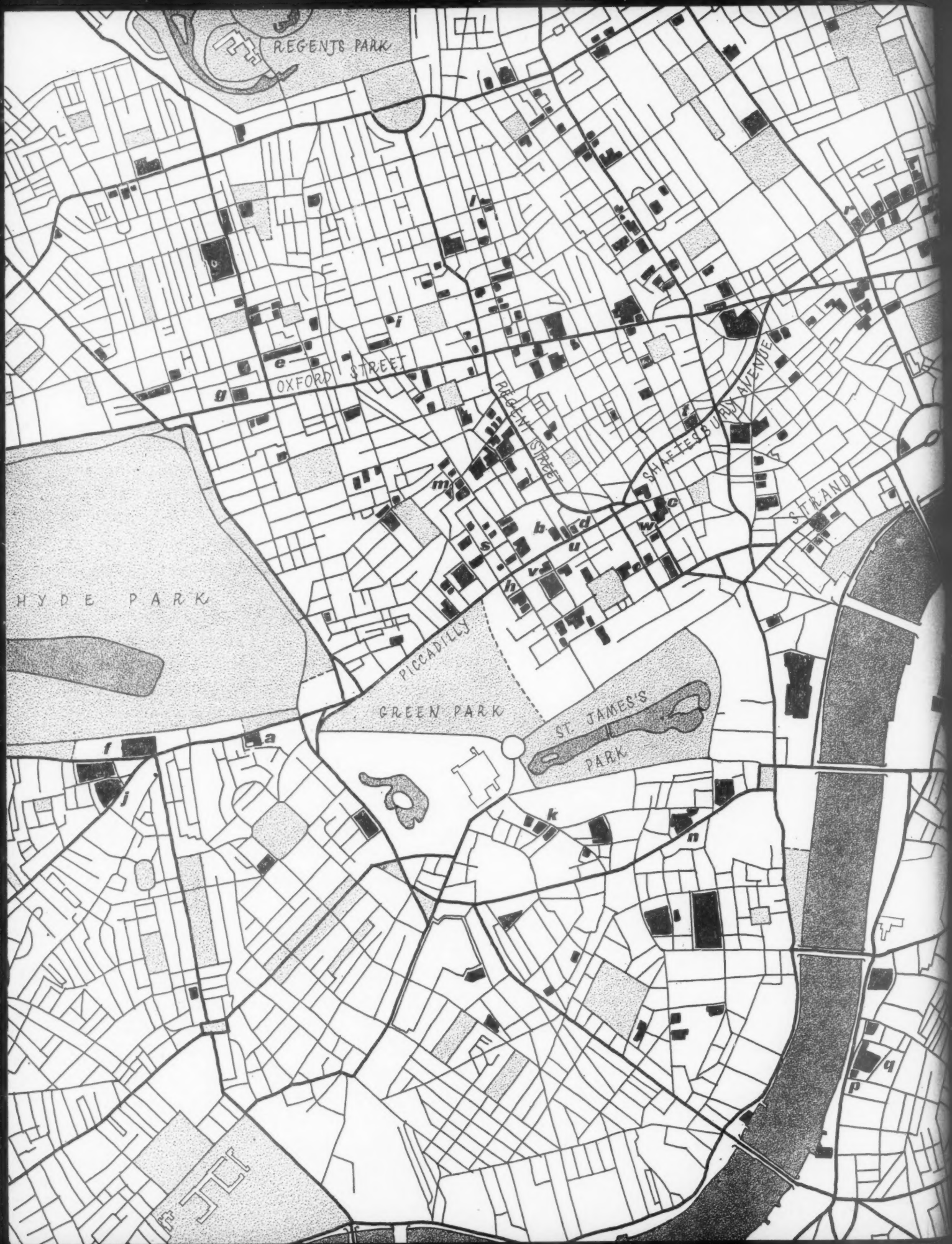
4, tomb of Count Mitrovitz in Prague Cathedral; a plate from Book IV of Fischer's book.

Fischer after this revolutionary statement hastens to add disparaging remarks on 'the trivial and superfluous Ornaments of carving in the Gothick Buildings'—indeed not represented in his plates—and laudatory remarks on symmetry and other 'general Principles, which can by no means be laid aside'—but the fact that his book did 'furnish admirers of architecture with Designs in sundry Species of Architecture' must all the same have appealed to the country which could appreciate Wren's assorted church plans, the Vanbrugh of Blenheim and of Vanbrugh Castle, the Chambers of Somerset House and of Kew, and, of course, the country of Alison's theory of aesthetics.


Yet the book, in its topical, Viennese parts, had apparently little influence on England. There is no outcrop of Fischeresque architecture. One of the rare façades with a marked Austrian flavour, the west façade of Wentworth Woodhouse, built just about 1725-30, has yet no direct relations at all to the *Historische Architektur*. Some of the illustrations to the *Historische Architektur* were copied, probably by Antonio Jolli, in the Entrance Hall of T. J. Heidegger's house in Maids of Honour Row at Richmond, probably in 1745.* They are all of Chinese subjects, the *dernier cri* in England at that moment. It may well be that Lediard's connexion with the Haymarket Theatre and Heidegger's managership of the King's Theatre in the Haymarket had brought the two men together, and indeed drawn Heidegger's attention to Fischer von Erlach's book.

As no further effects of the book on England have so far been shown, it may be permissible to end these commemorative notes with another minor case of a reflection of Fischer on eighteenth-century art in England, in this case on a very major work, Roubiliac's Argyll Monument of 1748 in Westminster Abbey, 3. The key motif here, of a winged genius inscribing on an obelisk the name of the deceased and breaking off in mid-writing is in all probability taken over from Fischer's Mitrovitz Monument in the Cathedral of Prague, 4, designed in 1714 and illustrated in the English as well as the German editions of Fischer's book. The source is especially probable, because Roubiliac, though a Frenchman, had worked as an apprentice under the Austrian sculptor Permoser in Germany before going to the Academy in Paris. Roubiliac was born about 1705. We can assume that he was with Permoser some time between 1720 and 1725. Permoser lived in Dresden in Saxony, but visited Vienna in 1721, the very year when Fischer's *Historische Architektur* was first published.

* See E. Croft Murray, *Burlington Magazine*, Vol. 78, 1941.





 The map opposite shows sites of office buildings in the West End of London for which planning permission has been granted, as well as sites on which buildings are being or have been erected since 1949; the letters show the position of the buildings listed below and illustrated in the following article.

key

- a, Agriculture House, Knightsbridge (page 221).
- b, Sackville Street rebuilding (page 221).
- c, Haymarket House (page 221).
- d, Airwork House, Piccadilly (page 221).
- e, Wigmore Street Development (page 222).
- f, block adjoining Hyde Park Hotel (page 222).
- g, 484-504, Oxford Street (page 223).
- h, Bowmaker House, St. James's Street (page 222).
- i, 95, Wigmore Street (page 222).
- j, Tattersalls site, Brompton Road (page 223).
- k, Locomotive House, Buckingham Gate (page 223).
- l, Electrin House, New Cavendish Street (pages 224 and 232).
- m, 6-10, Bruton Street (pages 224 and 229).
- n, Monsanto House, Victoria Street (pages 224 and 230).
- p, National Dock Labour Board (pages 225 and 227).
- q, 20, Albert Embankment (page 225).
- r, Sentinel House, Southampton Row (page 225).
- s, 45-6, Albemarle Street (page 225).
- t, Wingate House, Shaftesbury Avenue (page 226).
- u, Atomic Energy Commission, Lower Regent Street (page 226).
- v, Dunhill House, Jermyn Street (page 226).
- w, Finland House, Haymarket (page 226).

CRITICISM

Ian McCallum

WEST END OFFICES

I suppose it was to be expected that central London would be rebuilt piecemeal. War-time dreams of a shining metropolis rising from the ruins were clearly over-optimistic, if not positively naïve. After all, the capital was not destroyed. Expenditure on road construction that radical replanning presupposes held, and still holds, a very low place on the list of post-war priorities and, given our place in history, it was unlikely that agreement could be reached on a consistent aesthetic. Apart from the exceptional case of the South Bank, it was only in the City that 'super-block' planning seemed to stand a chance, and the possibility of stating a twentieth-century ideal of a metropolis not just a war-time dream. But even here, ten years afterwards, there is but one area, the Barbican, where comprehensive reconstruction to a consistent and unified visual theme seems not altogether hopeless, and this is prey to continual argument, to the battledore and shuttlecock of committees and ministries and authorities and commissions and councils and all the paraphernalia which is no doubt vital to the kind of democracy we have chosen to make for ourselves.

To me, as an architect, it seems that scope for committees and speculators is given a much higher priority in the scheme of things than scope for good architecture. The result of this in the City of London has already been considered in these pages.¹ The situation in the West End² is an altogether different one. First, the area was not so

¹ *Rebuilding in the City: the City of London on the brink of disaster*. J. M. Richards, A.R., June, 1954. For comment on the architectural implications behind the economics of City and West End building, see *The New Patrons*, J. M. Richards, A.R., October, 1955.

² The term 'West End' is used here for reasons of brevity, though some of the buildings illustrated come just outside its vaguely defined boundaries.

heavily damaged, slices were removed rather than whole sections, and, second, it did not have priority as the City did and rebuilding has only got under way since the abolition of licensing (though in the event the latter control proved of doubtful value so far as architectural quality was concerned).

If, therefore, there was no clear vision of a new City of London, it was hardly to be expected that there would be one for the West End. Piccadilly and its Circus, Upper and Lower Regent Street, Oxford Street, Charing Cross Road, Shaftesbury Avenue, Coventry Street, Haymarket, the Strand; these are the main thoroughfares, the metropolitan face we show to the world, and a very raddled and seedy face it is.³ Though their familiarity and associations may claim our affections, few could honestly say that their streetscape does. What was always the chief glory of this area were the eighteenth-century squares (like Berkeley and St. James's) and streets (like Grosvenor and Conduit-Bruton) in between the main thoroughfares: these we have, in the last fifty years, gradually but inexorably destroyed, not replacing them with our own ideal of a city, but leaving sufficient of the past to show up our own contribution to its maximum disadvantage as the coarse, scaleless, anarchic thing it is.

The rebuilding of the West End after the last war was inevitably a problem of street architecture; economic conditions alone made any departure from the *rue corridor* unlikely. Now there are certain precedents to follow in solving the aesthetic problems of such an urban pattern. Unity of design along both sides of each street is not necessarily essential, though an absence of it along all streets, especially in a period not marked for consistency of architectural character, can prove more tedious than the most banal uniformity. Since we find it so very hard to agree, perhaps some streets might have been left to anarchy modified by zoning, daylight and various bye-law restrictions, in the very English hope that happy accidents might ensue. But recent experience and London precedent suggest that a degree of uniformity is necessary in the successful urban scene. This is not to say that a number of architects, even ones with widely divergent architectural philosophies, cannot be employed in one street; nor that wall planes, bay and window rhythms and even roof heights cannot be varied;⁴ but if they are there must be at least an outline, master-scheme, which recognizes the way in which we use streets as well as the *directional* emphasis they impose.

Had the foresight and the will-power been there, one can imagine an architectural master-scheme for the whole West End area, if only in sketch form and only as an ideal, but which might have looked a little farther than just beyond our noses: a plan that might have given at least some three-dimensional shape to traffic solutions, roads, car parks, garages, pedestrian and access ways, shopping, commerce, recreation and advertising, that might, with the disappearing precedent of Bloomsbury before us, have indicated the relationship of streets and squares to one another. Its chief value would have been to give those architects now filling in gaps an *idea* for the street they are altering and for the buildings around them, many of which will be rebuilt long before theirs is; something they don't singly have the time, or the backing, to consider. No doubt it could only have been advisory, 'a pious hope' some newspapers would have

³ The only exceptions are Regent Street, Kingsway, Northumberland Avenue and Victoria Street; these, whatever one's opinion of their architecture, do register as streets, and it is interesting to note that, when they were built, with many different architects contributing, they were considered as entities.

⁴ Centralized compositions are not suitable to the *rue corridor*: they should be reserved for spaces such as squares, set-backs and large, isolated buildings.

called it, 'a waste of public money' others, unless the money was private, when it would have been a 'wild dream of impractical visionaries'.

But we have no such vision and the West End is, one would almost say, the *victim* of a building boom. It is only within the last few months that the passer-by has been able to get any impression of the scope of activity. It is still too early for him to get an impression of its character. The frontispiece map shows the number of sites already developed, being developed or cleared for action, and it shows at once that in the years 1956-7-8 London's West End and environs will be radically altered. I propose to illustrate by drawings and photographs what the character⁵ of the new development will be and to consider its quality.

It is at once evident that the general standard of design in West End office buildings is higher than in the City of London, especially in comparison with the first post-war buildings in the City. There are only two major examples of fancy dress architecture (steel frames concealed behind apparently weight-bearing walls, corniced, stringed, pedimented and columned), these are Agriculture House, Knightsbridge, designed for the Farmers Union by Ronald Ward & Partners and the Sackville Street reconstruction⁶ by Skipper & Partners of Norwich, whose design by the late G. J. Skipper was won in com-

⁵ It must be emphasized that this is not a complete survey but an analysis of character based on a selection of buildings.

⁶ The development is being undertaken by the Norwich Union Life Insurance Society in association with Sir Richard Sutton Estates Ltd.

petition in 1920 and is now getting under way again.⁷ In neither of them is there evident any desire to express contemporary standards of office planning and daylighting in architectural terms.

Two other blocks avoid direct expression of it on their façades to main thoroughfares, while changing to a utilitarian theme on their side or back façades: these are Haymarket House, Coventry Street and Haymarket, by Stone, Toms & Partners, and Airwork House, Piccadilly, by Norman & Dawbarn. Both of these buildings group some or all of their windows into twos and threes, presumably owing to a desire

⁷ This, with the pre-war Grosvenor Square scheme, is the only example I know of in the West End where a whole street or square is being considered as a visual entity.



1

This space would have contained the illustration of the Sackville Street reconstruction scheme, but the copyright of the drawing is owned by Sir Richard Sutton Estates Ltd. (see footnote 6) who objected to the author's comment on the designs and refused permission to publish them after a delay during which the block was made and the pages went to press.

2

Unabashed Neo-Georgian only occurs twice in new West End office buildings: 1, Agriculture House, Knightsbridge, by Ronald Ward and Partners, and 2, the reconstruction of the west side of Sackville Street by Skipper and Partners (unfortunately omitted for the reason given above). The next stage, where period detail has gone but nothing positive has replaced it, is unhappily represented in the West End by Haymarket House, 3 and 4. Airwork House, 5, by Norman and Dawbarn, does at least realize that two perpendicular streets meet in a right angle and not a flaccid space-blurring curve.



3



4



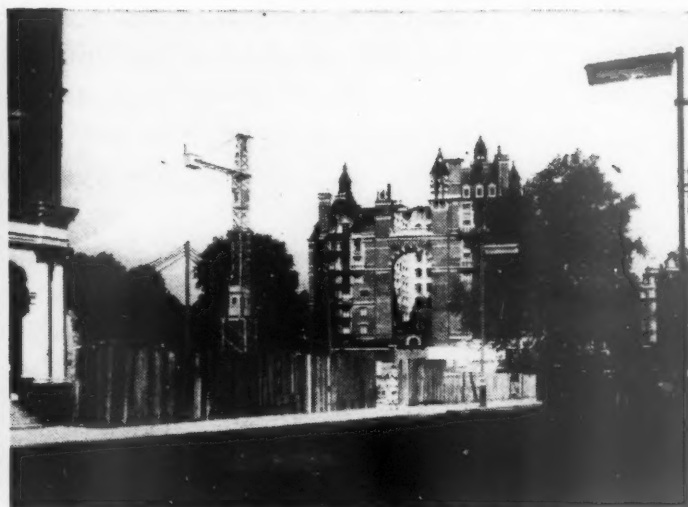
5



6

The sum of the rebuilding of all the separate sites shown in the map on page 218 will be a complete remodelling of the West End, even though it has

been piecemeal and unplanned. This article is an interim report, now that the pattern of this leaderless revolution is clear, and on several of the most



7

prominent sites buildings are still in construction. Here are three of them: 6, the Wignore Street Development by Cecil Elsom; 7, the site adjoining

for a broken rather than a regular rhythm. The virtues of such an effect are hard to uncover, indeed the chief virtues of many of the more distinguished office buildings lie in precisely the opposite—in avoiding such broken rhythms. Haymarket House, 3, were it not right at the centre of our capital city, and lying along two of its main thoroughfares, would not be worthy of comment in an architectural magazine. The intentions behind its design are, for me, impossible to unravel. I cannot explain the cornice above the first floor window, the only intrusion of history into the design, nor the way the change-over is handled from stone facing to brick on the side street, nor the vertical change from chamfered corner at ground level to curved above. What is hardest of all to understand is how this building could have gone up right in the centre of London in 1955-6; I can think of no other capital city in Western Europe that would have been capable of it, and find it hard to believe that London has so little pride and faith in itself.

Airwork House, 5, presents no such complexities. Its 'scraped' classicism and modernist windows are, to say the least, disappointing, considering their time and place, but the building is small and does respect the line of the street, a point rudely ignored by the curved corners of Haymarket House.

The building going up on Tattersalls' site at Knightsbridge by Stone, Toms & Partners, 11, though the awkward relationship between its various wings is clearly the result of paralleling the streets, manages at the same time, by setting the main wings back and projecting minor ones at right angles from them, entirely to break up the street line. The unwieldiness of this block, or series of blocks, is due not so much to size in itself as to the formal relationships, or lack of them, between the building and the spaces around it.⁸ It seems to be a prime example of what happens when an extensive site is rebuilt without benefit of a master-scheme and in a district of distinct character. One can imagine successful solutions which either

followed the existing scale and street lines or radically departed from them in, say, a tall tower block. Unfortunately this one does neither, though it does incorporate, unsuccessfully, something of each. The best parts of the building are the standardized office façades which have a pleasing regularity and lack of pretentiousness with which one is well content in an



9, Bowmaker House, St. James' Street, by Lewis Solomon, Sons and Joseph: the character of this design may prove an unhappy addition to a street whose character comes from a diversity of deeply felt styles respecting one consistent scale.



10, 95, Wignore Street, by Stone, Toms and Partners; like Airwork House, a cornice sprouts unexpectedly out of a design without other classical trimmings.

⁸ These are partly determined by day-light codes, density regulations and site coverage ratios; but, with it all, the architect is still left a fairly wide margin of choice.



the Hyde Park Hotel by Guy Morgan and Partners, and 8, 484-504, Oxford Street, near Marble Arch, by Fitzroy Robinson and Hubert H. Bull.

age of architectural mediocrity. Unfortunately, entrances and staircases are made the excuse for a heavily monumental treatment which only serves to emphasize all the weaker points of the design.

Since this article is mainly a consideration of new office buildings in so far as their external architectural appearance affects the passer-by and the character of a part of the London scene, and since there is sufficient to be said about that in one article, I cannot delve deeply into problems of structure, planning,

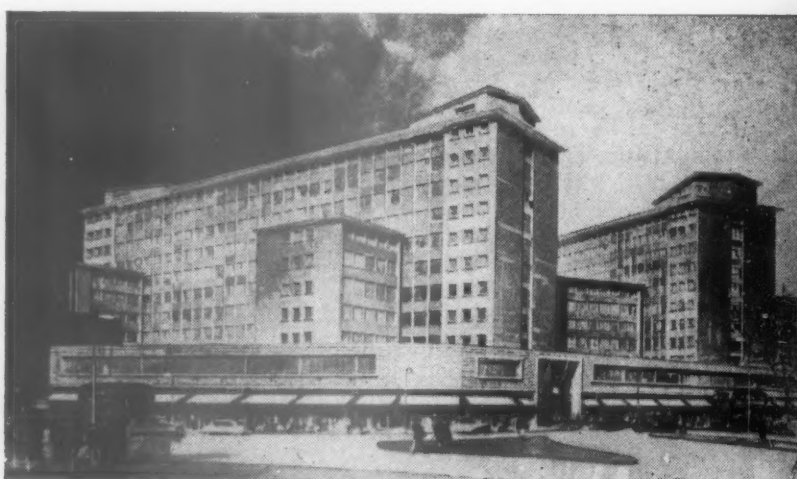
lighting, heating and so on. The majority of London office blocks are anyway rather primitive in the way they incorporate, or fail to incorporate, heating, artificial lighting and other mechanical services into the fabric of the building. However, the question of planning for flexibility of use, and the question of the best width for single and paired minimum offices is of direct relevance to external character, as will soon be clear from the buildings and projects I shall consider.

It is surprising how little detailed study has been given in England to office planning. At the RIBA symposium on office buildings held last April, it became evident that no agreement had been reached on the best width for minimum offices (nor for that matter on depth). Generally a 4 ft.-4 ft. 6 in. module centre to centre of window mullions was considered the best. This provides minimum offices with two windows of 8 ft.-9 ft. width, and offices with two desks by three windows of 12 ft.-13 ft. 6 in.⁹ Naturally, this module is likely to bear some relation to the bay spacing. What that will be depends on the placing of the structural members, on whether they are outside the wall (Chase Manhattan Bank, New York), in the wall (National Dock Labour Board, pages 227-228) or inside the building (New Cavendish Street, pages 232-233) and whether just inside or right back in a spine wall with the office space cantilevered from it (the Building Trade Union Centre in Stock-

⁹ This does not, of course, apply where large, undivided spaces are called for, though it is not uncommon for a client to want provision made for later subdivision.



11



12

Two more buildings by Stone, Toms and Partners. 11 and 12, the building on the site of Tattersalls, Brompton Road, as it appears in artist's perspective, with a progress shot as the passer-by actually sees it, 13. This is an unhappy mixture of elements from both tower block and perimeter types of development, drawn as though it could be seen as a free-standing building, which is physically impossible. 14, Locomotive House in Buckingham Gate: one more proof that keeping in keeping is futile.



13



14

15



16



Three of the better West End buildings in three views typical of the way they are actually seen. 15, *Electrin House*, New Cavendish Street (see page 232) in acute perspective, almost a solid wall of mullions. 17, the back of *Monsanto House* (see page 230): the upper floors of a tall block seen fanwise, with rectilinear proportions having lost all meaning. 16, 6-10, *Bruton Street*—the first white block on the right—(see page 229) in a distant street perspective showing how variations in the building line can produce effects of lighting and perspective that have hardly been considered in street design. Here they are accidental, but even so they transform the indifferent buildings beyond.

17

holm). It will be seen that there are no examples in the office buildings illustrated here of the first, nor of the last, types.¹⁰ The new West End offices are, therefore, all variants on the *structural members in the wall* or *structural members behind a curtain wall*, types. There are two variants on the former, in one a light pre-cast concrete frame is employed of short span in which the window mullions become structural members (National Dock Labour Board and projected U.S. Embassy, Grosvenor Square, AR, August '56, page 71). In the other the more conventional (average 16 ft.–20 ft.) bay-spacing provides the main rhythm with mullions and transoms emphasized in one way or another, or played down as much as possible.

The horizontal treatment of beam and panel infill can, of course, be endlessly varied, and is perhaps better considered in relation to the individual buildings themselves, and the same applies to design at street level. In many of these buildings, as is to be expected in an area where shopping and recreation are major activities, the architect is presented with radically different requirements to satisfy on the ground floor. Most of the designs, therefore, present an appearance, well justified by function, of slabs floating over free space—an effect much beloved by contemporary architects, though often harder to justify where ground floor activities do not strictly require it. This effect does, in an interesting way, reflect the manner in which one observes buildings in *rues corridors*. For as you walk along the pavement it is only the ground floor that you ever really see,

¹⁰ Sentinel House, Southampton Row, 21, combines two types; floors are cantilevered out from inner spine beams for three quarters of their span, the remaining quarter being supported on light structural members in the window wall.

and looking across the street, traffic often blocks ground floors and, unless the street is exceptionally wide, presents you with a sharply oblique view of only the upper part of the façades. It is important to remember this, for it brings home the part played by relief, or the absence of it, in the façade. It suggests that design by drawing board elevations, which one can recognize in all too many street façades, is in direct opposition to the visual requirements of the situation.¹¹

The West End offices that remain to be considered I have grouped into two main categories, based on structural systems in so far as they affect the character of street façades.

1. Those with window walls housing the structural framework; these are either (a) short-span like the National Dock Labour Board, 18, (b) wide-span like the offices in Albemarle Street by Ernő Goldfinger, 22, or (c) wide-span appearing as short-span due to intervening mock-structural mullions¹² as thick, or nearly as thick, as the structural members.
2. Buildings in which the window wall is entirely non-structural (in the sense that it does not carry the weight of the floors) and where the architect either conceals it in one way or another, sometimes suggesting another method of construction than the one, in fact, used or expresses it, say, by one of the systems of light metal frames known as curtain walls.

¹¹ Perspective artists, too, portray most of the buildings from positions in which it is either impossible or unlikely one shall see them; sometimes even the local geography is rearranged to suit the artist.

¹² I do not use this as a term of abuse, since I subscribe to Mr. Ove Arup's criticism of 'the structural fallacy,' which arises from the belief that it is *always* better to reveal externally the structural system employed.



window walls housing the structural frame

3. National Dock Labour Board, Albert Embankment, by Frederick Gibberd.

This office building employs a system developed by Felix Samuely, of light precast concrete members, bolted together, and making the window wall itself the structural frame. A strong repetitive rhythm is inescapable with this kind of structure, though as the N.D.L.B. and the U.S. Embassy designs* show, it allows for a number of different variations. How far subsidiary rhythms of infill panels and transoms are exploited or played down is a matter for the architect to decide. In the N.D.L.B. building the architect has chosen reconstructed stone facings to infill panels which read as light bands running across the façade, the structural framework appearing, except on the top floor where the windows are set back, as a light vertical grid crossing these and providing the window mullions. In addition to this another rhythm has been introduced of window transoms, staggered three-quarters of the way up or down alternate windows, and these appear to have the same 'weight' when seen from a distance, as the vertical structural members, 19, an effect which might not have been quite so restless seen obliquely on a street than it is from a distance on Lambeth Bridge or seen across the river. The surrounding frame to the façade, the band of recessed windows on the ninth floor and the two projecting balconies are all, presumably, an attempt to pull together a design employing a structural system which, with its brisk rhythm, would otherwise give the appearance of going on for ever. Whether to make a virtue out of the latter effect (as in 29), or whether to try to counter it in some way such as this, is a major problem facing architects today and has given rise to lively controversy in America recently as to the relative merits of 'concluded' or 'unconcluded' architecture.

19. 20. Offices, 20, Albert Embankment, by T. P. Bennett & Son.

The structure here has prestressed concrete floors supported internally on a spine beam and externally on beams which rest on precast r.c. columns at 8 ft. 8 in. centres. Panel infills are brick-faced and, as with the adjoining National Dock Labour Board, window transoms and here mullions as well, provide a strong and complex rhythm almost as dominant when seen from a distance as the load-bearing members. Another point of interest is that whereas in the National Dock Labour Board the shallow beams which make up the structural grid of the façade are concealed (except at 2nd and 8th floors) behind the infill panels, here beams are partially concealed behind panel walls, and partially revealed below them, adding a further element to the rhythm of horizontals, though it is one that reads from the street, 20, and not from a distance, 19.

21. Offices, Southampton Row and Theobald's Road, by T. P. Bennett & Son.

Sentinel House uses a system by which the office floors are cantilevered from a central flush beam. The cantilevers take care of three-quarters of the load of the floors, the remaining quarter being carried by the vertical columns in the window wall, which are at 6 ft. 8 in. centres. The shallow projecting wing with the gentle convex curve on the Southampton Row side is a most unusual device in *rue corridor* architecture, justified, presumably, on the grounds that this is at the junction of the two main roads, and that the curve leads the eye round on the approach from Kingsway, down which the Theobald's Road side faces. It is, for the same reason no doubt, that the latter elevation is given a somewhat monumental treatment, with a colour change in the central and bottom panel infills, which emphasizes the vertical columns, and with recessed flanking balconies on the top floor.

22. Offices and Shops, Albemarle Street, by Erno Goldfinger (under construction).

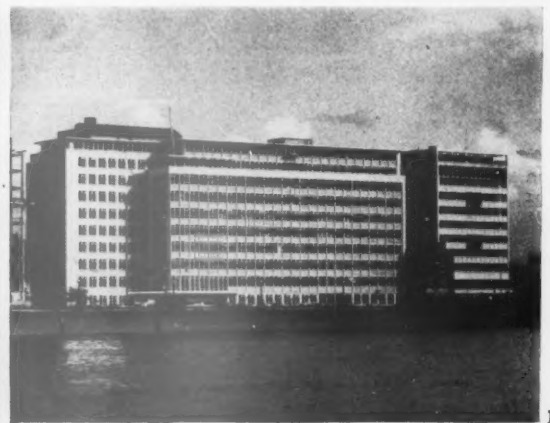
The reinforced concrete frame here provides the dominant rhythm to the façade, though there is a counter-theme of recession and projection resulting from the 'photobolic' clerestories (inset top-lights with a re-

* The American Embassy Building in Grosvenor Square by Eero Saarinen will also employ this system though here the bay spacing will be varied 8 ft., 8 ft., 6 ft., 3 ft., 8 ft. and so on, the rhythm being staggered from floor to floor.

short span



18



19

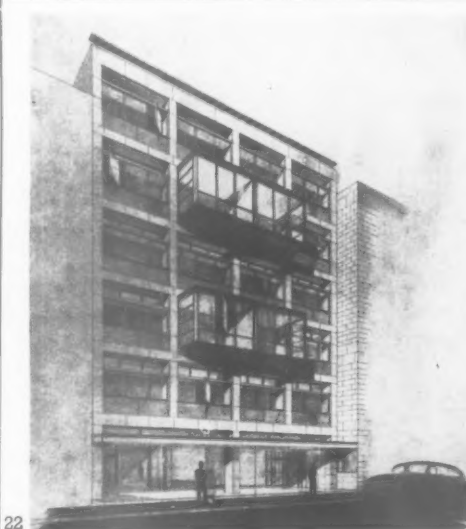


21



20

long span



22



23

flecting upper surface to the transoms) and glass bays projecting across the two centre bays on the second and fourth floors: the latter would appear to be another example of an attempt to centralize a composition which would otherwise be unconcluded (see framed balconies in 18, National Dock Labour Board).

23. Offices, 6-8, Bruton Street, by Cecil Elsom. A design which depends for its qualities on

a complete absence of relief. Windows and infill panels are brought into the same plane as the outside surface of stanchion and beam casings, junctions being defined merely by light shadow-lines. The asymmetrical window rhythm (1/3-2/3 divisions) emphasizes horizontal continuity, though vertically (owing, possibly, to the 'conclusiveness' of obligatory set-backs) a pause is suggested by a light line above the top row of windows, like a rule at the end of a paragraph.

24. *Offices, Cinema and Shops, Shaftesbury Avenue, by Sir John Burnet, Tait & Partners (under construction).*

The structure of Wingate House is a steel frame with stanchions at 18 ft. centres, and two mock-structural mullions at 6 ft. centres in each bay; these mullions are 4 in. narrower overall than the stanchions and are terminated on a shallow beam at the first-floor clerestory so that it is possible to distinguish their non-structural character. Nevertheless, the important part they play in the general appearance of the building by their width, 9 in., and by their vertical continuation through the panel walls justifies, I consider, the term 'mock-structural.' Panel infills will be faced with silver-grey brick; stanchions, mullions, beams and blank walls will be faced with stone. The single-pane windows give a calm and authoritative rhythm and the façades are terminated by blank stone panels in the horizontal direction and in the vertical by a void at the ground floor and a glazed canopy at the top (another solution, see 23, to the problem of set-backs).

25. *Offices, Lower Regent Street and Charles II Street, by Trehearne & Norman, Preston & Partners (under construction).* Here, in a building for the Atomic Energy

Commission, the architects have framed all the windows into panels, though without any of the complex subtlety of the Dunhill building. 26. Stanchions are at 24 ft. centres with intervening mullions housing air-conditioning ducts; these are not differentiated as strongly as they are in another recent example of external ducting—the Mile High Centre, Denver, Colorado, by I. M. Pei and Associates (*Architects Journal*, August 16, page 232), and, indeed, are evidence of a very rare piece of equipment in English office buildings. 26. *Shops & Offices, Jermyn Street, by T. P. Bennett & Son.*

In the Dunhill building (as the photograph shows, it is only partially completed and will be continued along both façades), the structural frame is set behind the window walls, and instead of expressing their 'weightlessness' by a light metal and glass grid as in 29, the architects have banked the windows into panels which are under-cut and float over a solid stone backing on one façade and over a deep recess on the other; in addition, rebates provide recessed shadow lines of varying widths. The way these details are handled has a nearly Italian sophistication about it, accentuated by the curious detail at the corner whereby a mass of stone (in fact only a facing) appears to float a couple of feet above

the pavement. The whole complex system of projection and recession is strongly, almost brutally, framed by wide stone bands and a deep glazed recess on the top floor.

27. *Finland House, Haymarket, by Kenneth Wakeford, Jerram & Harris (projected).*

The offices for Finnish timber and wood-working companies in Haymarket have a structural frame set behind the window wall, which itself is an austere stone-faced grid of mullions and beams, the panel-infills reading as one with the windows. It does not attempt to give direct expression to its non-structural character but suggests rather the system of construction used in the National Dock Labour Board. The ground floor and mezzanine reveal the recessed structural columns and, being almost entirely glazed, do here indicate the construction which, if it had been of the short-span type, would have needed a deep beam to carry the load of the upper façade. The disconcerting effect of the shallow concave corner panel is doubtless due to the fact that one expects a convex rather than a concave form here.

28. *Offices, Victoria Street, by Sir John Burnet, Tait & Partners.*

The structural frame of Monsanto House is of precast concrete with stanchions at 13 ft. 6 in. centres; this is immediately behind the curtain wall and contiguous to every third mullion; the latter are of a hollow U-shape to house vertical runs of pipe and electrical conduit, and this accounts for their width and appearance of being load-bearing. An attempt to lighten this effect has been made by fluting the mullion surface from window sill to transome and by shallow recesses framing the windows (see also 14, page 232). To indicate the concealed rhythm of structural bays, small tongue-like projections appear where the junctions of beam and stanchion take place behind the curtain wall: a curious device inexplicable except to the initiated, like the origin of the triglyph. Since this building does not 'float' above its ground floor but appears to stand on a solid stone base, the architects have given this an effect of arcing by recessing the wall over the windows and giving them gabled heads, the angle of which is echoed in the entrance canopy. The general appearance of the building is extremely successful when seen obliquely down the street, as all of these buildings, but for 18-21, are. The brisk, even rhythm fits well into its Victoria Street setting, and is not disturbed by the rather fussy striping of the facing to the panel infill. Also, since these architects apparently feel the need, in common with a number of the others under discussion, to accent the gridded façade by the projection and recession of canopies and balconies, it is much more satisfactory, given the directional emphasis of streets, to place these asymmetrically rather than to centralize the composition.

29. *Offices, New Cavendish Street, by Gollins, Melvin & Ward.*

It is surprising that this building should be the only one in the West End, so far, to employ a standard curtain-wall consistently over all of its street façades. There is much to be said for and against curtain-walls of this kind. Briefly, one can list, in favour of the curtain wall: dry construction and therefore quick erection, a pre-determined module, a light, graceful repetitive rhythm well-suited to *rues corridors*, and with wider use, presumably, cheapness resulting from mass-production. Against it are its relatively recent development, maintenance costs, for, particularly where the infill is all-glass, cleanliness is vital and, possibly, monotony, though this should be no more marked than it is in many a regular Georgian street where the effect is often restful rather than monotonous.

So far as the original design of such walls is concerned a great deal of very careful attention needs to be paid to the profile of the metal sections and to the design of fixings, beads and overall surrounds. In such architecture all attention is focused on these, and the whole quality of the design rests in them. The colour and texture of infill panels is important but subsidiary. The relationship between mullion, cill, window head and transome, the ways in which panel-infills are divided, if at all, can be endlessly varied by thickness, projection, recession and colour values. Since these walls are becoming a standard product, it is of the utmost importance that the best architectural talents should be recruited to solve the problems of scale and proportion they raise. This has not yet occurred and the façades of the building illustrated here and on pages 232-3 lack the refinement of scale, proportion and detail that, for example, the Lever Building has shown to be possible.

long span with intervening mullions



24



25

2

non-structural window walls



26



27



28



29

OFFICES ON

ALBERT EMBANKMENT

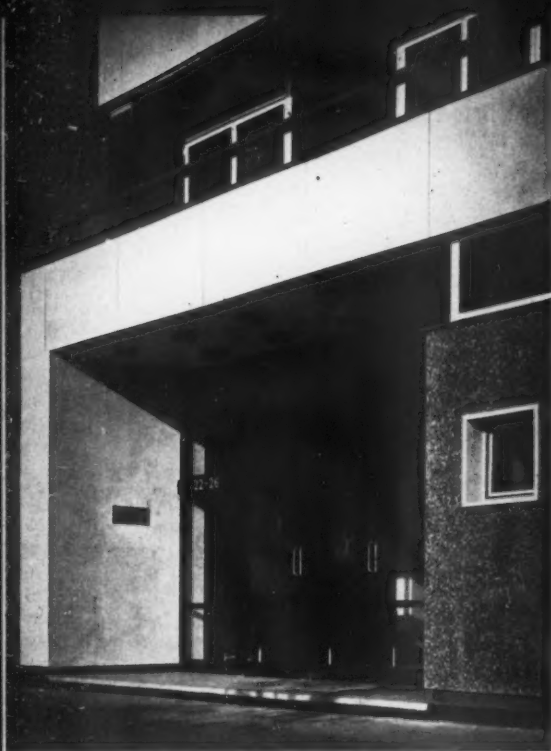
ARCHITECT	FREDERICK GIBBERD
associate architect	F. Darnell

1. the National Dock Labour Board building from the south-west. The entrance for cars to the parking area at the rear is seen in the right of the picture, passing through the structure of the building. On the ninth floor, with the windows set back, is the canteen; the projecting balconies belong to the offices of chief executives.



The function of the headquarters of the National Dock Labour Board naturally make it very different from an ordinary office building. Instead of large floor spaces, generally for an unspecified use, the requirements were exactly known and they varied considerably. The site

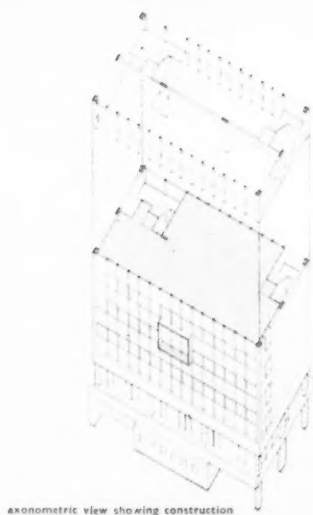
itself, being on the river frontage, with splendid views, was another major influence on the character. The frontage is quite narrow (70 ft.) and so that as much of the views as possible could be enjoyed by the occupants the full frontage is built on and the building is to the



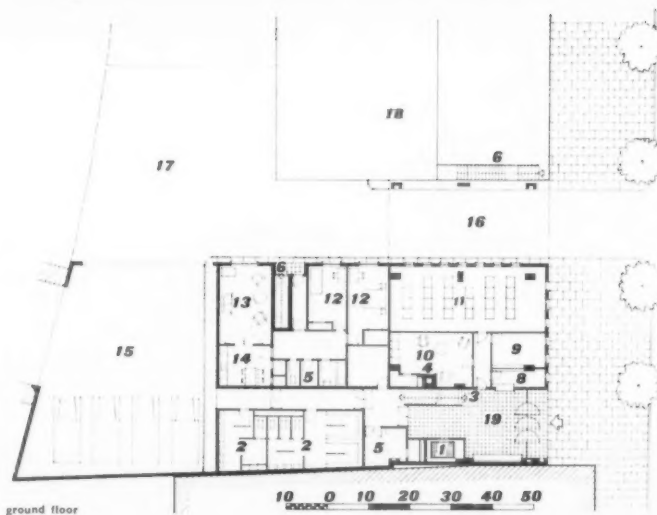
2



3



axonometric view showing construction



ground floor

- key
- 0, offices.
 - 1, lift.
 - 2, lavatories.
 - 3, main stair.
 - 4, boiler flue.
 - 5, store.
 - 6, escape stair.
 - 7, main entrance hall.
 - 8, porter.
 - 9, switchboard.
 - 10, waiting room.
 - 11, punch room.
 - 12, bedroom.
 - 13, caretaker's living room.
 - 14, caretaker's dining-kitchen.
 - 15, garage.
 - 16, way through.
 - 17, service yard.
 - 18, caretaker's proposed building.
 - 19, ducts.



4th floor



OFFICES ON ALBERT EMBANKMENT

- 2, the entrance from Albert Embankment.
- 3, tenth-floor roof terrace.
- 4, office of

one of the senior officers of the Board. 5, main entrance hall. 6, the canteen.



4



5



6

maximum possible height permitted by the L.C.C.

The resulting basic form is a ten-storey, narrow vertical block parallel to the river front, with the main stairs and lifts at one end and an escape stair at the other. Large areas were required on the ground floor for machine rooms, lavatories and garaging cars, so the building extends over the rear of the site with top lighting. Access to the rear portion is by a drive which passes through the building.

The proximity of the river suggested a riverside terrace but since the building is cut off from the Embankment by a busy traffic road, a terrace is formed at first-floor level by setting back the upper floors. It is hoped that this first-floor terrace will one day extend over the adjacent site on the south, where another tower-like office building is proposed; the service drive would provide vehicular access for both buildings and the common first floor would make a fine terrace overlook-

ing the river for the occupants of the buildings.

In planning the accommodation it was decided that the communal and more important rooms should be near the top of the building where the views are best. The canteen is on the tenth floor and occupies the whole river frontage, with the kitchens behind. Below this are the dining rooms and below this again the Board and Committee rooms. The office floors underneath are planned so that the whole river frontage is occupied by staff, the lift, lavatories and other services being at the rear. Two of the more important individual offices are provided with projecting balconies. The splendid river views led to the roof being designed as a roof garden, screened from the wind and easily accessible from the communal rooms below. The basement contains storerooms and boiler rooms, and in part has been specially reinforced to serve as a potential air-raid shelter.

The building is of reinforced concrete construction which was found the most suitable for this particular structure. In the interests of precision and speed of construction, it is largely of precast concrete units. Because rooms were required of a variety of sizes the building was designed to a module of 4 ft. 5 in.; all the window mullions are on this centre, enabling partitions and, therefore, room frontages, to be multiples of this dimension. Out of this need for close-spaced window mullions the structural engineer, Felix Samuely, designed the external walls as a thin reinforced concrete grid, which acts both as a structural frame and as the window mullions.

In each storey in-situ columns placed down the length of the building 22 ft. apart support a concrete spine beam. A composite concrete floor slab spans from the spine beam to external portal frames on either side of the building—distances of 19 ft. and 16 ft. 6 in. The floor slabs consist of precast prestressed T-section concrete planks with an in-situ topping and the roof slab is also constructed in this way. The 2-in. thick topping is cast on permanent asbestos cement formwork, carried on metal clips which are sprung over the webs of the prestressed planks. The castellations formed by the tops of the planks are bonded with the in-situ concrete. Suspended ceilings are used.

The external frames each consist of two uprights and two horizontal members. The uprights act as mullions and windows span between them, and the horizontal members act as cill and head beams. The frames are bolted together vertically and joined horizontally by the cill and head beams of windows between the frames. For the greater part of the building continuous horizontal rows of windows alternate with rows of storey-height precast concrete exposed aggregate slabs.

The end walls are composed of precast corner columns and triangular precast concrete frames (each with an in-situ vertical member), which are designed to act with the floor slabs in providing wind bracing. Behind these columns and frames is an inner skin of concrete breeze blocks, and in front of them precast concrete facing slabs of storey height.

The internal finishes follow the general practice for buildings of this character, except for rooms with special functions. For example, the canteen has a sound absorbent slotted fibrous plaster ceiling; the board room an opepe wood block floor, golden laurel wall panels and a fibrous plaster ceiling. Opepe wood block floors and walnut, sycamore and mahogany panels have also been used in the rooms for the senior officers of the Board.

OFFICES IN

BRUTON STREET

ARCHITECT

CECIL H. ELSOM



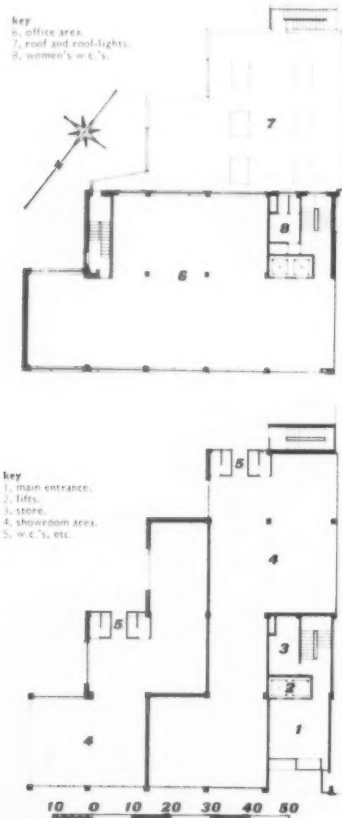
7. Bruton Street frontage. The outer cladding is Portland stone over an inner skin of brickwork.

This office building, for which the clients were an investment company, filled a gap left by enemy bombs during the war; the site, which is between Bruton Street and Bruton Lane, is triangular. The ground floor, which is for showroom accommodation, covers most of the site, while the seven upper floors, lettable as offices, are rectangular, thus leaving a large area at first-floor level which has been arranged as a roof garden.

The structure is a steel frame, on pile foundations. The front to Bruton Street, which is clad in natural Portland stone over an inner skin of 9-in. brickwork, conceals the frame entirely; but with the rear elevation the frame is left visible, and faced with terrazzo, and there are infill panels of 11-in. cavity brickwork.

In the entrance hall one wall is faced in Levanto marble and the floor is Pumadi marble. The main stairs are paved with terrazzo, the escape stairs with grano. Office floors are mahogany wood block, laid on a 3-in. screed which contains ducting for power points and telephones. Walls and ceilings throughout are plastered and painted. Lavatories have terrazzo floors and tiled walls. The roof is finished in asphalt on a reinforced screed, on glass silk quilts, with cement paving laid on bitumen for certain areas. Parapets are finished with aluminium coping.

There are two high-speed automatic lifts, and heating and hot water are obtained from gas-fired boilers.



8, the entrance hall opening on to Bruton Street. The right-hand wall is of Levanto marble, and the floor of Pumadi marble.

OFFICES IN

VICTORIA STREET

ARCHITECTS | SIR JOHN BURNET, TAIT AND PARTNERS

Monsanto House is near the Westminster Abbey end of Victoria Street and faces south. Of the twelve floors, two are below Victoria Street and directly accessible from a private service road on the north side. The building is planned on a system of bays at 13-ft. 8-in. centres, each bay being subdivided into three parts to give a maximum flexibility of office layouts. The subdivisions are formed of movable honeycomb plastic partitioning. The directors' offices on the sixth floor have double-skin lightweight partitions.

The structural frame and the basement are of reinforced concrete. Most beams, floor and wall panels and stair flights are precast in large units; structural columns were cast in-situ for structural continuity. The floor panels are of ribbed construction 13 ft. by 4 ft. 6 in. by 4½ in. over-all thickness, the panels between the ribs being only 1½ in. thick. Wall panels were 12 ft. 9 in. by 3 ft. 3 in. high by 5 in. thick with two window mullions projecting to carry window frames and stone cladding.

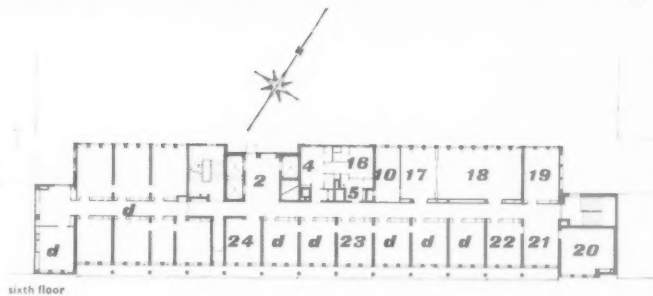
The elevation to Victoria Street is faced in Portland stone to eighth-floor level and lavender grey brick on the floors above to reduce the apparent height of this façade. Windows are steel framed, except on the ground floor, where they are polished bronze, with painted softwood sub-frames and quartzite aprons below. The balcony on the sixth-floor level which marks the directors' floor is lined in Portland stone and white acid-stippled opaque glass and its floor is finished in heather quarry tiles precast into units of four. Rainwater runs away in an asphalt tray below the tiles, which are therefore laid without falls or gutter. Balcony and canopy fronts and name panels are faced in Pretoria black granite. The balustrades and the balconies are of wrought iron and teak, with white stove enamel panels set into the timber. The rear (north) elevations are faced in Uxbridge flint bricks with precast copings and cills. Flat roofs are finished with asbestos tiles bedded on asphalt. On an upper roof an experimental area of foamed slag asphalt has been laid.



9



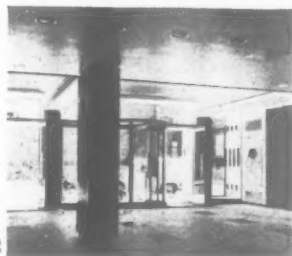
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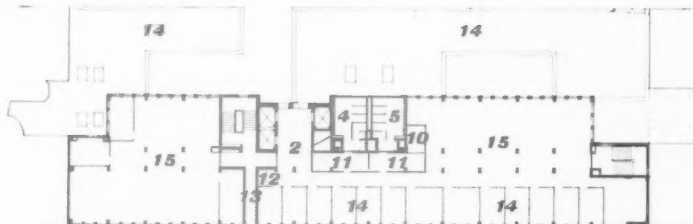
sixth floor

OFFICES IN VICTORIA STREET

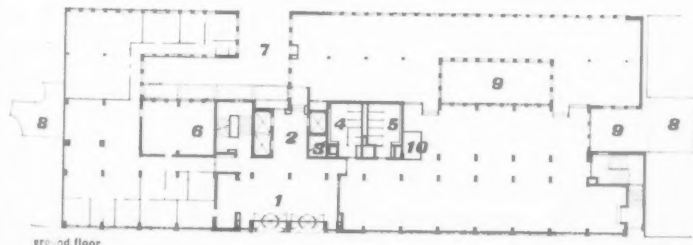
- key
- 1. entrance hall.
 - 2. lift hall.
 - 3. plenum ducts.
 - 4. men's w.c.'s.
 - 5. women's w.c.'s.
 - 6. mailing.
 - 7. service yard.
 - 8. light area.
 - 9. areas.
 - 10. servery.
 - 11. cloakrooms.
 - 12. visitor's cloakroom.
 - 13. firemen's lobby.
 - 14. private offices.
 - 15. junior staff and typists.
 - 16. dressing room.
 - 17. dining room.
 - 18. board room.
 - 19. chairman.
 - 20. interroom and secretary.
 - 21. vice-chairman.
 - 22. conference room.
 - 23. waiting room.
 - 24. directors and secretaries.



12



first floor



ground floor

10 0 10 20 30 40 50



13

9. the south-facing Victoria Street frontage, which is faced in Portland stone, with quartzite aprons below the windows. The balcony along the sixth floor marks the directors' offices. 10. interior of the balcony, which is paved with quarry tiles. 11. the canopy over the entrance

which, with the name panels seen to the right and left of entrance, is faced in Pretoria black granite. 12. inside the main entrance hall; the walls and floors are faced with white marble. 13. part of the north facade; the bricks are Uxbridge flints.

In the entrance hall the walls and floors are faced with veined white statuary marble, and door frames, revolving door casings and lift door linings have bright polished lacquered bronze finishes. Beam casings and lighting baffle fittings are in fibrous plaster. The main stairways are walled in terrazzo up to dado height. In most of the offices, the floors are of sapele wood block on a lightweight screed; beams, columns and structural walls are plastered. The plastic partitions are finished light grey and pale green on alternate floors, and the doors, lift-lobby ceilings and stair soffits in a series of five strong colours. Walls are kept light in tone to aid light penetration; ceilings are suspended, and lined with acoustic sheeting.

Heating throughout is by low pressure hot water, and the whole building is ventilated by a partly recirculated plenum system. The boilers for these services are oil fired. All electrical services are by underfloor ducting. Three passenger lifts serve all floors, and a service lift connects the tea serveries on each floor, and the directors' dining-room on the sixth floor, to the kitchen.

OFFICES IN

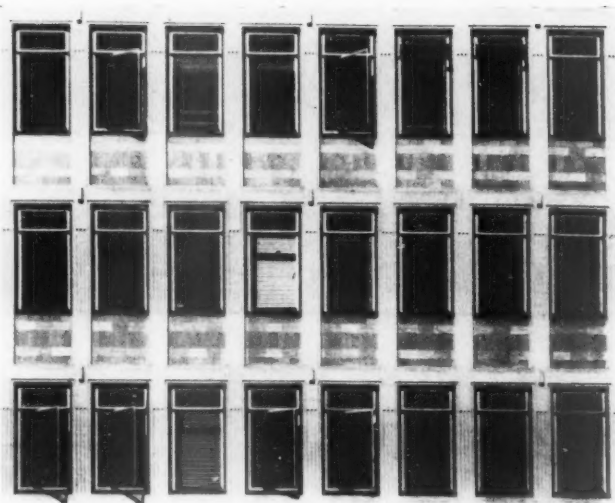
NEW CAVENDISH STREET

ARCHITECTS

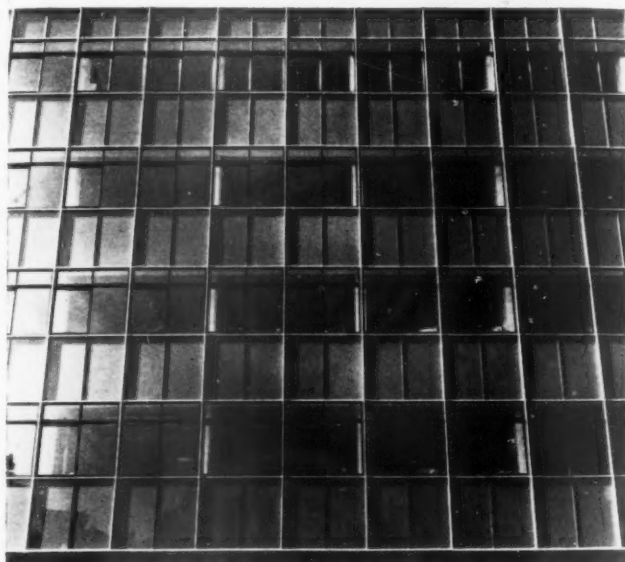
**COLLINS, MELVIN AND
WARD**

This office building, Electrin House, is on the north side of New Cavendish Street, between Bolsover Street and Great Titchfield Street. It was designed to give the maximum area of divisible office space on the upper floors and showroom space on the ground floor. The basement was designed for storage only. The structure is reinforced concrete carried on multiple pile caps on bored piles. Floors and the upstands under the windows were cast integrally with the frame. The building is faced with curtain walls on a 2-ft. 10-in. module. The curtain wall is constructed of extruded aluminium sections with steel opening lights, painted black, the infilling panels being of blue-green glass slabs. Due to the London County Council fire regulations, there is a 4-in. thick reinforced concrete inner skin up to window-cill level, behind the curtain walling. Internal partitions are of lightweight concrete blocks.

The main entrance in Bolsover Street has armour plate glass doors and fanlight, a black and white terrazzo tiled floor and one wall of *bleu belge* marble, which extends the width of the arcade externally. The free-standing columns in the arcades at each end of the building are finished with black terrazzo. The main staircase and floors to landings are white terrazzo, and offices and showrooms throughout have sapele wood block. Walls and ceilings are plaster, painted. The building is heated by an oil-fired boiler serving radiators



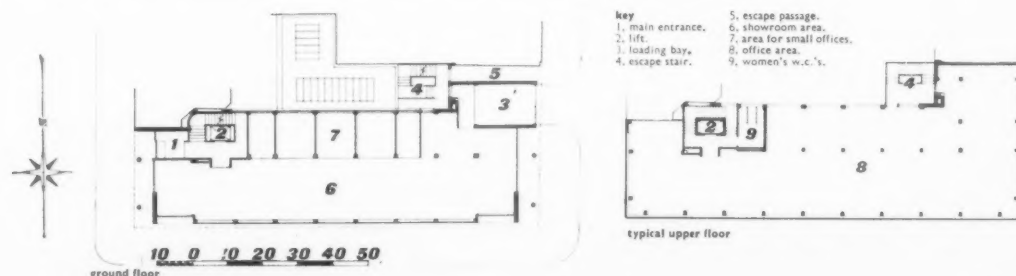
14. part of the Portland stone-faced façade overlooking Victoria Street; panel infills are faced with quartzite. See also page 226.



15. the curtain wall facing on the New Cavendish Street front. Infill panels are blue-green glass; the opening lights of the windows are painted black. Facing page. 16. the corner of New Cavendish Street and Bolsover Street. The columns in front of the entrance are faced in black terrazzo. See also page 226.

with low-pressure hot-water circulation, with the exception of the main entrance hall which is heated by a ceiling heating panel. Summer hot water is supplied from a gas-fired boiler.

W. V. Zinn was consultant structural engineer.

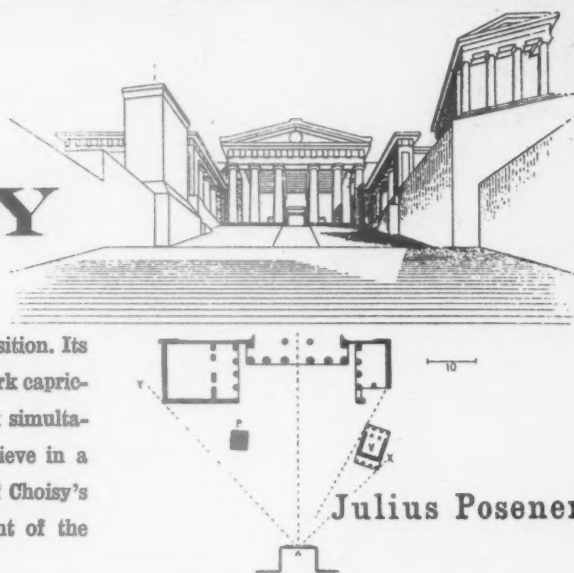






Auguste Choisy's *History of Architecture* may prove to be the most influential work of its kind ever published. It documents the growth of the art from pre-history to the beginning of the modern movement, but it also affected the growth of the modern movement itself. Its discussions of Ponderation of Masses, such as this study of the Propylea, right, introduced a generation of French architects to asymmetrical, picturesque composition. Its brilliant isometric analyses of the buildings of the past—Gordon Cullen's dark capriccio, opposite, superimposes Clermont on Perigueux—taught them to think simultaneously of structure, plan and volume. Above all, it taught them to believe in a logical connection between form and technique, and it is mainly this aspect of Choisy's thought that Julius Posener discusses in his pioneer historical assessment of the *History of Architecture* which appears below.

CHOISY



'The seductive lucidity of the excellent Choisy.' (Hans Sedlmayr.)

Sometimes, it is the opponent's eye which most clearly perceives the qualities of a great man. I find Professor Sedlmayr's short reference to Choisy which forms the motto to this article much to the point. The good antagonist, of course, is always an admirer.

It is due to scholars like Sedlmayr that we no longer fully admit the validity of Choisy's point of view. We have become more modest—and also more involved—than the protagonists of the French rationalist school had been: they thought that they held the key to understanding all history in their theory that it was, in the last instance, the development of technique.

By technique, Choisy understands not merely the arsenal of lifting machines and cutting edges available at any given moment, but the labour at hand, its organization, the material available, the means of transport, the structure of society itself: in short, the whole geographical and social background of any period of architecture.

Given this background, not only the structure, but the shapes themselves were supposed to have emerged with a kind of automatism:

'The principle of Gothic architecture—like most discoveries—can hardly be ascribed to one actual inventor; the germs mature in the shade; then, suddenly, we witness a number of developments which are brought about by the logic of circumstances. Everywhere, the need was felt to escape from the difficulties inherent in the masonry of the groined vault; and, naturally, builders introduced the rib; again, they noticed that the piers of the high naves were buckling under the impact of thrust, and the only remedy was the flying buttress.'

Once the question was posed, the solution was indicated. Development, according to this thesis, is the gradual liberation of the builder not so much from the fetters of technique, but from his ignorance of its conditions. Once these were recognized, the technique was mastered and the classical moment—Choisy's 'correct' moment—was reached. Later, the builder took liberties with his material, he began to play with it; and decadence set in.

Choisy's architect of the past at

all times resembles a French engineer, an Auguste Choisy, in fact, projected back from the boulevards of nineteenth century Paris to the lanes of Egypt, the streets of Rome and the Parvis Notre Dame. And Choisy himself, a magician of logic, seems to produce the solutions of those former Choisy's from his top hat with a dry, professorial 'Et voilà'.

The influence of his work was immense. He is the father of Perret's and even of Le Corbusier's doctrines. The majority of histories, general and special, which appeared since he wrote, bear witness to this influence; although they refrain from actually deriving shapes from material premises, as Choisy tends to do. While this may be called commendable caution, it at the same time weakens the link between premises and results which renders possible the mathematical beauty of Choisy's demonstrations.

Choisy's architect of the past works under a twofold impulse: he tries to solve the problem in hand, and he receives solutions from his forbears. The stream of history, with all its tributaries and ramifications, is shown in Choisy's work as issuing from a limited number of sources. But this passing on of inventions is relegated to a secondary plane. 'The logic of circumstances' may even promote simultaneous invention in different places. Choisy does not, like Rivoira or Strzygowski, derive the whole sequence of architectural development from the efforts of one particular race or nation: Lombardy or the Aryan East. As a guiding principle, this kind of racialism in art history has proved too narrow.

By and large, however, even these scholars are still sailing in the wake of the rationalist school, and their digression is no more than a shifting of emphasis. But in recent years an entirely different view has gained ascendancy: the view which denies the dependence of form on technique. This school, which has a long tradition in Germany, maintains that, in every case, it has been the spirit which embodied itself in works of art. As we are turning our backs upon functionalism, the offspring of the French rationalist school, we are more and more inclined to accept the tenets of this school.

Two difficulties arise here: that of the so-called primitive stages and

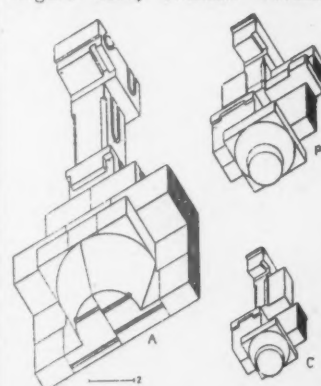
that, related to it, of development. If the artist is free, at all times, to realize his vision, one can no longer speak of primitive stages, nor of development in the sense that richer or more perfect works follow upon simpler beginnings. As a reaction against the doctrine of progress in art, this theory must be called welcome. No one, at present, would assert that the Doric of Athens is superior to that of Paestum. It is different; and the word development cedes place to the word change. But if all development is denied, the obvious faults of masons who were not yet in full possession of the adequate technique of cutting stone must be seen as perfect realizations of a certain state of mind. Interpretation is given a great amount of freedom. (See 1.)

Interpretation is the essence of history, and technique also has to be interpreted by the historian. But once the palpable facts of building have been left behind as irrelevant to the consideration of form, a fairly severe doctrine is bound to take their place as an ordering principle, and the danger is always near that the evidence is made to fit the doctrine. A subtle change of meaning tends to occur: the play is no longer the thing, but the critique, and the work of art has to serve as a paradigm for an historical concept. In matters of art, the evidence is liable to look different in the eyes of each beholder. Sedlmayr and Summerson, two scholars, professing the same views, yet see different things when describing the portals of Amiens. To Sedlmayr, its heaviness appears refractory to his theory of a hovering Gothic architecture, and he chooses to consider it as a remnant, as yet unassimilated, of the Romanesque period, while Summerson selects it as an example to prove that very theory and calls light and airy what Sedlmayr describes as heavy and earthy. Viollet-le-Duc had to adduce theory of structures to prove his theory of Gothic forms. The writer of aesthetics need not be so explicit. It is always possible to discover in a work of art the things one wishes to find there.

While it was mainly German scholars who rejected the rationalist approach as unspiritual, it was left to a Frenchman, Pol Abraham, to carry the attack into the enemy's camp by demolishing Viollet's theory

of Gothic structure. Viollet had taught that Gothic ribs 'canalize' the thrusts acting in the vault and conduct them towards its corners; and Choisy was fully committed to this view. Abraham, on the contrary, has shown that a rib vault of a certain span, thickness and weight acts in no way differently from a groined vault answering the same conditions. He drew the conclusion that the rib had no structural meaning. (See 2.)

No attack could have been more devastating. The Gothic rib and its structural significance had been the very starting point of Viollet's doctrine, the sanctum in the rationalist chapel—sit venia verbo. Now the conclusion was widely drawn that the rationalist approach was not only wrong, but that it was not even rational: that shapes, in architecture, could not be derived from structure. Developing Woringer's ideas, Professor Pevsner

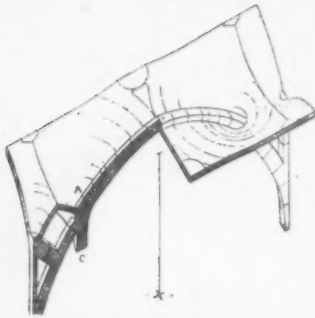


1. in Choisy's view the Doric temples of Magna Graecia did not attain the Parthenon's technical perfection. He finds fault with the cutting and placing of the stones in the metopes and triglyphs in the giant temple at Agrigento A, the great temple at Paestum P, and another temple at Agrigento C.

maintains that the ribs, at Durham, represent that stage in mediaeval development when the emphasis shifts from surfaces to lines: that the rib vault was, in fact, a symbolic skeleton rather than an actual one.¹

¹ These remarks refer to Professor Pevsner's statements in 'European Architecture'. In the more recent volume on County Durham ('The Buildings of England') Professor Pevsner shows that the ribs at Durham were erected prior to the webs and calls the architect a technical inventor.

However, the fact that the rib does not play any part in the finished vault does not prove that it may not play a part in its erection. It certainly simplifies the building of the vault. It permits a differentiation between the precise cut of the rib and the easier masonry of the web; and, by



2, the rib behind the extrados in the vault of Henry VII Chapel, Westminster, can hardly have a load-bearing function; Choisy, who firmly believed in such a function in the Gothic rib, calls this and similar late examples decadent.

means of this differentiation, it renders possible thinner vaults.²

Mediaeval masons could not check their proceedings by means of structural analysis. Abraham could show that the rib vault did not work in the way Choisy supposed it to work; yet, for all we know, the cathedral builders may have laboured under Choisy's misconception. One is inclined to apply present-day distinctions to the attitude of men of earlier times. If a mediaeval mason would have been asked if he considered himself an engineer or an artist, he would not have understood the question.

These considerations modify, to some extent, Abraham's conclusions. All that can safely be said is that the rib did not play the part Choisy had assigned to it. That it had no structural meaning cannot be affirmed.

The rib, as an auxiliary structure for the erection of the vault was, of course, no invention of the eleventh century. It had been in current use in Rome. But the Romans, as a rule, did not show this auxiliary structure. In the Baths of Caracalla, coffers are placed across the groin, affirming the surface of the vault as a continuous whole. The Gothic rib, once adopted for its practical advantages, would have been more difficult to hide; but had the masons of 1140 continued to look at the vault with Roman eyes, they might never have adopted the rib. The masons of Aquitaine might well have continued to cover their naves with Byzantine domes; yet here also the rib made its appearance. The vaults of Angers are still near-domes; but they are domes with ribs; and Choisy himself considers their presence there 'peu justifiable.' Their meaning, here, can only be called symbolic.

One cannot deny that whatever

² Pol Abraham denies that the rib played any important part in the erection of the vault and that it led to the construction of lighter vaults. It is true that the extrados of Gothic vaults is covered with a thick layer of rubble and mortar, which is particularly heavy over the springings of the vault. But this covering was placed after the comparatively thin shell had been built, and the heavy load over the springing, that is to say over the tas de charge mainly, may have been put there with the intention of deflecting the outward thrust of the vault.

That the separate erection of ribs and webs should not have rendered easier the erection of nave vaults I find difficult to believe. Groined vaults over the main span of mediaeval churches are rare; and those which have been built did not, on the whole, prove particularly successful (Vézelay, Mains).

is done in architecture has symbolic meaning. Not only may a rib or a column occasionally assume such meaning: it is always present. Architecture shares this symbolic character with all art and, beyond, with every activity of the mind, not excluding science nor, indeed, technique.³ But in architecture symbolic form invariably manifests itself as structural form.

This may happen in different ways: A structural member may clearly and vigorously affirm the service it is rendering. This is Choisy's thesis. The rationalist school does not, by any means, deny the presence of art in architecture. Its contention is that shaping tends to proceed in the direction of structure. This does not necessarily mean that every serving member has to be expressed, or even shown. The Roman vaulting rib is a case in point. The architect is not bound, as Perret puts it, to show the muscles and the nerves. He is given a great latitude of choice.

But there is also, in architecture, indirect or symbolic expression of structure. Sedlmayr regards the thin shafts and ribs in a Gothic nave as a symbolic structure masking the stronger members which actually support the building. In the Palazzo Strozzi, the rusticated whose strength and grading so clearly express the character of the load-bearing wall are in fact a comparatively thin cladding applied to a brick wall. In both cases, the symbolic structure has made the meaning of the real structure clearer: the thinner members of the Gothic nave, and the heavier ones of the Renaissance façade achieve a higher degree of 'truth' than is possessed by the structures themselves.

Finally, an architectural member may assume the shape of structure without taking any part in the task of supporting loads. Geoffrey Scott tries to invest engaged columns and entablatures in Renaissance architecture with an indirect structural meaning. They represent, he says, vertical and horizontal forces acting in a load-bearing wall. I find it difficult to accept this explanation. Engaged columns and entablatures in Renaissance architecture are structural symbols in their own right, without any relation to the building to which they are applied. The point is that even where such architectural trappings are used merely to divide surface, they appear in the guise of structural members.⁴

Perhaps architecture may be seen as structure in love with itself. A work of architecture may be interpreted under any aspect: one may understand it in terms of lines, of movement, of space. But instead of assigning a linear function to a rib, or a sculptural meaning to a column, I should prefer to look at architecture in the opposite way: that a line or a sculptural idea has been made architecture by being changed into structure, real or symbolic.⁵

It is here, I feel, that the school most strongly opposed to Choisy has failed: it does not consider technique as an integral part of architecture. This school has opened our eyes to Choisy's shortcomings; but until a

³ cf. Ernst Cassirer: *An Essay on Man*. Yale University Press, 1940.

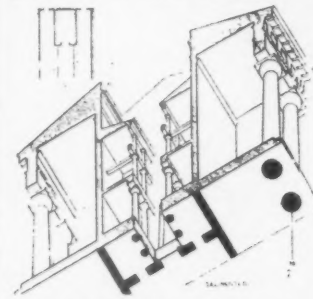
⁴ We may mention here the translation of structural form into a different medium, as in the Doric temple. Choisy shows examples of faulty masonry in early triglyph friezes. The form was given, he insists; the masons tried to realize it as well they could.

⁵ I am by no means certain if there is any difference other than in grade of 'directness' between a real structure expressing its service and a symbolic structure superimposed upon it, as in the palazzo and the cathedral. There is a difference, though, between both and columns used as decoration.

writer appears who unites Choisy's feeling for structure with the philosophical and aesthetic understanding of a Wölfflin—for no less would be required to write the history of architecture as a symbolic form—the only comprehensive history we possess is Choisy's.

Choisy approaches each period in architecture with an introductory note setting out the conditions which have informed its works and then, immediately, deals with current techniques: les procédés. He seems to take into his hand the individual stone, or piece of timber, and from them builds up the wall, the pier, the column, the vault, the roof, following their vicissitudes throughout the period.

The drawings which illustrate his observations are of didactic simplicity: he never indulges in an

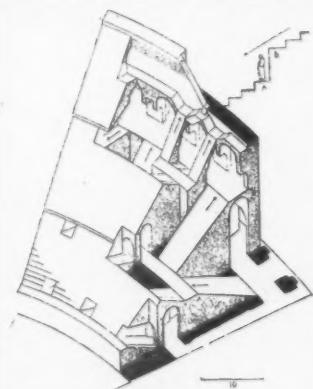


3, axonometric of a temple at Selinunte.

'artist's impression' knowing it to be the opposite to the architect's approach. Not a line too many is shown. The half capital, the quarter plan must and do suffice to make his meaning clear. He prefers axonometric figures, showing plan, section, interior and elevation in one drawing, 3.

His next chapter, in each section, is inscribed 'forms,' and here the formal development of the period is subjected to the same terse scrutiny which before was applied to the methods of building.

Finally, the development of the significant building itself is shown: the temple in Greece and the church



4, the amphitheatre at Nîmes.

in mediaeval France; and he concludes by showing peripheral types, like the erections of military architecture and engineering, 4.

The sections end with notes on the organization of building crafts, geographical distribution and related matters. Nor are questions of proportion, spatial composition and urbanism neglected, and those final chapters are particularly rich in happy observations. He demonstrates the so-called optical corrections in Greek architecture, 5, but adds a warning not to consider those swelling columns, convex stylobates and column contractions as means of



5, Choisy deals with visual as well as purely technical problems; here he demonstrates the effect of diverging verticals.

optical correction only. They are, Choisy says, more pronounced than would have been required for the corrective effect, and this more was meant to be perceived: *Que l'on en ait ou non conscience, il résulte de cette allure inusitée des lignes une impression étrange et neuve. Non averti, le spectateur sent quelque chose d'insolite; averti, il reconnaît une attention délicate qui le charme: les contours prennent, grâce à cette recherche, un air de distinction auquel le goût ne saurait demeurer indifférent: l'édifice échappe à l'aspect vulgaire des constructions à lignes rigides, il s'empare d'un caractère imprévu et neuf qui se soustrait peut-être à l'analyse mais nous saisit alors même que nous en ignorons le vrai sens et la cause.*

I have quoted this passage in extenso, because it gives a fair insight into the working of Choisy's mind. He tries desperately to explain something which he clearly feels to transcend analysis; and he arrives at the compromise to say that the artists who devised these refinements wished to draw attention to their research into the secrets of optical illusion; but in the end he abandons even this precariously balanced piece of rationalism and admits, with a shrug, that here he finds himself in front of an aesthetic effect 'qui nous saisit alors même que nous en ignorons le vrai sens et la cause.'

To represent him as a dry technician would be very wrong indeed. Neither he, nor Viollet-le-Duc should be considered in this light; but one must not forget that French romanticism is not incompatible with logic. Choisy has the sense for the dramatic, for the grand historical survey in which his chapters culminate, when a final *quod erat demonstrandum* assumes a character of dynamic beauty.

The language in which his comments are couched is in keeping with his figures: again, not a word too many is said. His utterance is reduced to an eloquent laconism. It is terse, latin, professorial. Compared with him, even his compatriot Viollet is found verbose. His language is so French, in fact, that it may prove refractory to translation. Even so, one wonders how a didactic masterpiece of this order should still remain, after more than half a century, inaccessible to most English students.⁶

⁶ In 1909, on the occasion of Choisy's death, Phéné Spiera expressed the wish that his book, invaluable for the student, should be speedily translated.



6, Auguste Choisy.

Report on

CALIFORNIA

from *Jonas Ackerman*



1. mine's cabin, Sierra Nevada Mountains.



2. late nineteenth-century houses, San Francisco.



3. Therson House, Berkeley, by Greene and Greene.



4. house in Marin County by Roger Lee.



5. school at El Cerrito by John Warnecke.

Nowadays anyone who comes to this part of America to look at architecture expects to see 'Bay Region Style,' an art-historical term which Lewis Mumford self-consciously coined a while ago, and which somehow stuck, so that while we don't use the words around here we are haunted by the idea. It really does represent something, I think, though it is an awkward misnomer, because what it represents can be seen from Seattle to Santa Barbara—a distance nearing 2,000 miles. The Bay Region, which includes San Francisco and all its satellites, is not so much the centre as the point of greatest concentration. The 'style' is peculiar to the coastal region probably because of the special conditions of history here: a Spanish Colonial ancestry, which we share with Texas and the South-western States, is blended with the oriental flavour that hangs around our ports, where not only the goods but the people of Asia have played their part. To these exotic components one must add a Yankee inventiveness in the use of wood that produced the simple farmhouses and barns of the Gold Rush country, 1, and later the fantasies of San Francisco row housing, 2.

But a factor that is less often taken into account is the character of more recent history. The West produced no architects before this century, though many came here to take advantage of the conditions caused by rapid growth. The first to arrive came not from the Chicago 'frontier' but from the Atlantic seaboard, and when they wanted to escape from the Beaux-Arts tradition they had to look all the way back to the early work of McKim, Mead and White (Vincent Scully's 'Shingle style') or further. The heroes (from the point of view of modern Bay Region architects) of that generation, particularly Maybeck and Greene and Greene, 3, are direct offspring of William Morris (William Sumner Greene designed not only the chairs and tables of the Gamble house in Pasadena but the light switches and rugs as well).

When you concoct a recipe out of casual Spanish adobe construction, Japanese tea houses, and latter-day arts-and-crafts, you cannot hope to serve a dinner that Mies, Corbu, or even Wright, will be able to digest easily: and this is why when you run through anything published by the Museum of Modern Art in New York you don't see much of what has happened in this idiom. Philip Johnson is on a strict International diet.

I do not mean to imply that all of this work looks backward in one way or another. When you think of the best published things of Belluschi and Harwell Harris (leaders in the style, though both far from the actual Bay Region) you get an idea of vitality, not regressiveness. The two I just mentioned have been drawn away from the coast now, to the M.I.T. Architecture department and to Austin, Texas, and it will be interesting to see what effect they have outside of their natural habitat. Younger men, in the San Francisco area particularly, have turned occasionally to more literal orientalism than their seniors did, in the same way that their contemporaries in Los Angeles or in Texas tend to embrace International doctrine more wholeheartedly than anyone did a few years ago. The Sino-Japanese school includes the designer Henry Hill, whose work looks a good deal better in photographs than it does in life, and, not unnaturally, two able architects of Asian parenthood (the first as far as I know to make a success professionally here)—Worly

Wong (Campbell & Wong) and Roger Lee, 4. They are both mainly house designers (Lee is a specialist in maximum space for minimum cost in redwood and glass construction), though both have done churches.

The mention of house architects prompts a digression at this point to emphasize the fact that the great preponderance of private residential commissions received by the architects here from Wurster's work of the '30s onward has affected the whole character of design. There is a housiness about nearly everything one sees: I mean to say, an intimacy, familiarity of scale, fussiness of texture, colour, until it seems doubtful whether we are any better prepared to take on a large civic commission in the event that it should come than a miniaturist would be to execute a fresco in the dome of St. Paul's. I cannot much blame the architects for this because outside of Southern California the right people have seldom captured large commissions. Yet many schools have been commissioned to advanced designers: partly because the bureaucrats of education at this moment want to make the children feel at home, so there is no call for monumentality. The example illustrated, 5, by John Warnecke spreads single classroom units over a hillside and is assertively domestic.

On the other hand, there are some small house designers, such as Joseph Esherick, whose work is impressive in scale. In houses such as the one I show





6, house at Berkeley by Joseph Eschrick.



7, house at Portland, Oregon, by John Yeon.



8, Christian Scientist church at Belvedere by C. W. Callister.



9, centre for the behavioral sciences, Palo Alto, by Wurster, Bernardi and Emmons.



10, naval research station at Monterey by Skidmore, Owings and Merrill.

here, 6, or even in his cottages at Lake Tahoe on the Nevada border, there is a force that comes from quietly affirming the traditions and wealth of wood construction. I would say the same of John Yeon, who practices in Portland, Oregon, and has used a strong carpenter's tradition in North-west architecture, that is like nothing else one sees in America. 7.

Nobody seems to appreciate the virtues of anonymity, as may be seen in any of the great tract-developments that are absorbing the 2,000 people who enter California daily. Row houses (even in the rare instances when they are designed by our best architects) are differentiated as much as the budget will bear: in materials, in colour, in setbacks, in plan—until you have a kind of synthetic variety that reminds me a little of the cast-iron whatnot dear to Prince Albert. Another tendency that ought to be causing some worry is the outcome of the unexpected popularity of 'modern' architecture in residential areas. Strange effects are produced by entire neighbourhoods filled with houses and supermarkets designed by young men brought up in the new school. Because unlimited materials and techniques are at hand the confusion of visual effects in such places is unparalleled by any past age. Technology alone cannot explain it: there is an excessive expression of personality that destroys any urban quality of harmony and gives a total impression something like an interminable broadcast from a psychoanalyst's couch. I can say in defence of this sort of thing that the western architect, while he has certain traditions to refer to such as those I mentioned, does not have them immediately at hand to exercise their sobering control. He builds in an environment devoid of history. Most houses are being designed for lots far out from the city in communities where the oldest building is of the present century, often of the last decade.

A few individualists are necessary to a healthy culture, however, and one would like to preserve the sensitive and imaginative ones for the instances when it is important to assert ideals. I think of C. Warren Callister, whose Belvedere Christian Science Church is the most convincing religious structure I have seen lately, 8, and his former partner, Jack Hillmer, whose houses have a finesse reminiscent of the Greens.

Returning to the present day, I should like to mention Wurster, Bernardi, and Emmons' Centre for the Behavioral Sciences on the grounds of Stanford University in Palo Alto, California, which is a curiosity as an institution, 9. The Ford Foundation, which must get rid of a specified number of millions annually, established this Centre as a place where practitioners of the quasi sciences—particularly psychology and sociology—might confer with each other, work on projects, and do research with the aid of the Library of the nearby university. The architecture is residential in character and nestles comfortably into the surroundings. It is a remarkable job, particularly in view of the fact that it had to be built entirely within the span of six months.

It is a building perhaps unique in function, because its main purpose is to provide thinking space. This is of two kinds: public and private. The public, including offices, a cafeteria, seminar and lecture halls, and a small library, is arranged on the crown of the hill in a Greek cross plan that provides good circulation and separation of functions. Private space is provided by units of four to eight studies with broad balconies arranged on the slopes so that every scholar has an unimpeded view through oak trees to distant fields and towns. The architecture is simple, and unadorned except by the luxury of its natural setting. In form and in concept the Centre recalls those ample Carthusian monasteries of the Renaissance which, with their garden-cells, must have been far more comfortable than the princely palaces of the time. But nobody lives there; the appointees find lodging in the many suburban communities of the area, and use the Centre chiefly during the day.

Another important structure of recent vintage is also an academic institution, and it is almost as unorthodox in its purpose: a Graduate School for the U.S. Navy, intended to provide advanced technical training to officers who have had several years of experience after graduation from the Naval Academy, 10. The novelty of the idea permitted some enlightened brass to sneak an uncompromisingly modern design past government officials not noted for their architectural open-mindedness. (Since then the same firm was chosen to do the Air Force Academy in Colorado and has already been successfully attacked in Congress.) The architects are Skidmore, Owings, and Merrill, but in this case the leviathan firm gave a free hand to the designers in their San Francisco office, and parts of the concept may properly be regarded as a local product. The result is a freedom from the elegant mediocrity of their usual work as well as an originality that is surprising to find these days even in small offices. The job has some obviously Miesian passages, but the best of it is a domesticated ferroconcrete style that successfully fits the area in a way that Belluschi, for example, was not able to do when he turned away from wood.

Now the initial unit is in use, the School of Engineering. Another portion, the School of the Line, is to be added at an indefinite later date. There are five buildings in the first campaign. One, a boiler house, is at a distance, among the older (pseudo Spanish) structures of the hotel that the Navy occupied there about 13 years ago. The remainder are well grouped about a paved court amid tall pine trees and other evergreens that enrich the site. The largest, of five-plus storeys of 30,000 square feet per floor, is for laboratory sciences. It is reinforced concrete designed to eliminate girders and beams—a plate design which is cantilevered out several feet on each floor for sun control and window-cleaning. The other buildings are all two-storey and are less interesting. One is an Electrical Engineering Laboratory, another a Mechanical-Aeronautical Engineering Laboratory, and the last is a classroom and office building 56 ft. x 655 ft. on an axis perpendicular to the main structure. The whole programme was carried out for less than \$15 a square foot. This is phenomenally low for this kind of work nowadays.

The site planning is the most appealing of any I have seen lately, and if I am misled by the handsomeness of the site itself I would credit that to the designers also. The boiler house is a variation of the building of the

same purpose at the Illinois Institute of Technology and could not have been done without that inspiration. The two-storey buildings are familiar, too; the possible variations of concrete and glass rectangles being limited. But the big building, with its sunken court, its cantilevered plates, is worth some enthusiasm.

I have also something to report on a short tour of the area around Los Angeles. Contrary to my expectations I was fascinated with the development there, which cannot be praised so much as architecture, but which is perhaps making that area the most purely mid-20th-century spot in the world. The one thing that immediately strikes the visitor is not the buildings but the transportation system. It is almost impossible to get anywhere by public conveyance. The area is now much greater than London, but on top of this it is unspecialized, so that one cannot 'go downtown' since there are many shopping areas and a visit to the tailor and the butcher might take one to two places 15 miles apart. Without a car of one's own nothing can be done, and the casual visitor is forced to rent one the moment he steps off the train or plane. Once in his car he has his choice between wide arterial boulevards with automatic traffic signals set for speeds of 35 miles per hour or more, or overhead freeways which get him over great distances at much higher speeds. In our architectural touring we easily accomplished over 100 miles of driving within the city limits each day. This system is continually being improved, with consequent increase in decentralization, and one wonders what will become of the city core, which now seems to be held together only by the fact that they are stubbornly building new structures for the city government there. The whole pattern of city living is affected by the fact that it is possible to live over 30 miles from the place where one works, and it is often necessary. For example, colleagues of mine at the university there cannot live near their work because the campus is in an elegant, high-rent neighbourhood, and while some of them are nearby in terms of time the distance is never calculable in terms of blocks. Attempts to halt this spread outwards seem to fail. The Metropolitan Life Insurance Company has built some flats of about 12-14 storeys in a central position, and they cannot rent them because people are willing to go any distance to have their own house, no matter how small or close to the neighbours.

This situation cannot help affecting the character of the architecture. Everyone is in a car; nobody walks anywhere; most streets are deserted except for vehicles. One sees buildings either in passing by at high speeds or from the inside. Every large commercial establishment or group of small ones has to have parking space for almost one car to a customer. This means that all large buildings are isolated in the centre of large parking areas, which would be quite advantageous for certain qualities of design. **11, 12.** But mostly the designers appear to believe that since one is going to pass by their work so fast it need not be done with care.

So much for the vehicular aspect of their architecture. But perhaps this aspect affects another characteristic: the necessity to make all commercial architecture extreme in character. Every shopfront is an advertisement—an eye-catcher, a trick of some sort. The day of the hamburger stand in the form of a hamburger is gone, but we now have exploitation of the most extreme clichés of the magazines. Decorative louvres, Olivetti constructions, pseudo-Mies rectangular hopscotch. Not

all bad, though. While it is a shock to encounter those areas I suppose the all-over quality of design is superior to any stretch of street of equal length in America of the last 50 years. The novelty of it is increased by the fact that the façades are like posters; they come off when they are a little old, to be replaced by something that came into vogue in the past few months. A block of shops in Beverly Hills (high income section) will be as new as a film set from end to end, and will stay that way.

What about buildings? Here my enthusiasm dampens. The thrilling vitality of the city itself is perhaps antithetical to good design. In order for this area to expand at the rate of the last decade a new attitude toward architecture has had to grow up. Architecture is now mass-produced. The offices themselves are factories. Welton Becket is Hero-Architect of the new civilization. He has a five-storey office building in downtown Beverly Hills with several hundred employees. I didn't visit it, being afraid that I would discover a pneumatic tube system rushing sketches about among the Rendering Department, Cost Accountants, Engineers, and Public Relations Counsels. The buildings suggest this: they are technically acceptable and aesthetically as dismembered as such an organization must be. This high-powered approach to the problems of the profession has won the firm many of the huge commissions in that area. What they fail to capture seems to go to Pereira and Luckman, relative newcomers to the West, who brought to architecture the sales experience of the great soap manufacturing corporation of which Luckman was formerly an executive. **12.**

Among things of quality that I found in that area there was little of recent vintage. The work of the better architects seems to be weakened by the need to be fashionable or photogenic and it shows a strong tendency to imitation. I should say that this is true of Neutra, too, though he is legitimized by the fact that he imitates himself (as of the '30s). Though not new, Charles Eames' house seems to me the most worthwhile sight in the area. **13.** It is much better than the photographs indicate, because of a human warmth that doesn't get through the camera lens. Eames himself is doing some wonderful work with films, which he distributes through the Museum of Modern Art and the University there. The latest one is on German Baroque Architecture. He steered us to the most appealing site in the area, the Farmer's Market. This is not what it sounds, but a high-price retail market made of stalls scattered about illogically over a large area which is partly covered, partly open. One can buy hot food at several stalls to eat at umbrella'd tables, in the fashion of the Italian *rosteria*, and other places sell infinite varieties of cheese, or condiments, or baked goods, made before one's eyes. It is very colourful, and oddly European for this most American of all cities.

I hope it has emerged from my observations that the architecture of California in its quantity and variety is uncommonly vital. It also is a dialectic curiosity because here a well conceived, small-scale regional architecture grows alongside buildings whose ultimate sources are in Europe. Unfortunately this makes nearly everybody battle about it as if principles were more important than quality. The battle is unhealthy because it is self-perpetuating and delays a possible fusion of traditions that could make this expanding area the locus of a fully matured twentieth-century expression.



11, Beverly Hilton hotel by Welton Becket.



12, C.B.S. television studios, Los Angeles, by Pereira and Luckman.



13, Charles Eames' house, Los Angeles, designed by himself.



14, the Farmers' Market, Los Angeles.





The festooned lamp-post sums up that attitude of mind towards traffic control and management which adds written instruction to an existing traffic situation, left. There is another attitude however, top and bottom right, which sees in the road itself a blank sheet on to which can be inscribed by means of paint, texture and structure a more vivid and organic method of traffic control. It implies the acceptance of conventions which, once agreed upon, will cancel out the growing complexity and confusion of the written word.

Gordon Cullen

Alphabet or Image

A COMPARISON BETWEEN VISUAL AND LITERARY CODES FOR ROAD TRAFFIC

Imagine the road, with all its ancillary structures, junctions, signs, planting, service stations etc. as a linear town with a character as individual as any of the towns it passes through. In a town the buildings and objects which compose it are all around the observer and are thus seen in juxtaposition, but on the road they are stretched out and attenuated. Nevertheless, this is partially cancelled out by speed, which coalesces the road into a single typical character. Or should do. There exists a well-defined traditional vernacular for sea, river and canal transport but one would be hard put to it to define the characteristic pattern of road transport. It varies from the functional to the quaint, from austerity to vulgarity and from clarity to chaos. The reason for this is that the motor-car took over the road network and vernacular of the horse-drawn vehicle and is still desperately trying to shake off this incubus, this old, tight snake skin. There is still the horse-and-cart mentality in the approach to highway design, the subconscious assumption that a man in charge of a lethal weapon can read involved notices, can stop his car on a sixpence, can anticipate hazards as easily at 60 m.p.h. as he could at 3 m.p.h. on his two feet.

In place of this mentality we need a new vocabulary: a visual code in place of a literary code.

In attempting to establish the proper character the first consideration ought to be the understanding of vision when the mind is preoccupied by driving, whether at speed

on the open road or slowly in built-up areas. Just as the shape of the earth's undulations is revealed in a plastic way to the swiftly moving motor cyclist (the pressure as he ascends the slope and the release of gravity on descending) as opposed to the constant pull of gravity on the pedestrian, so surfaces and objects connected with the road take on a quite different meaning at speed. Structures and landscape which to the pedestrian are isolated, are brought into relationship by speed and become a part of the continuum. The designer is working in a new dimension, a plastic, snaking dimension in which the serial presentation of objects to the eye must be manipulated so as to produce clarity. Similarly the driver in town, preoccupied with pedestrians and other hazards, demands the simplest and most obvious clues as to his progress. Clarity is the objective and its pursuit will establish a proper code. The technique for achieving this is to invest ordinary objects with a limited and defined significance which will be universally accepted. Thus, for instance, that part of the road set aside for parking will be surfaced with a particular texture or colour. Once established it will be immediately recognizable and down will come the signs, the confusing clutter of instruction that bedevil town and country. Instead, we can anticipate a new functional clarity based on bold colour, texture and symbol that will be integral with the visual receptiveness of the driver it serves.

These two pictures, at opposite ends of the scale, show the commonly accepted alternatives. The first attitude is to tell you in detail what to do even though the attempt, by the motorist, to assimilate this knowledge may lead to disaster, 1. The second attitude is to simplify the road system by elaborate construction to such an extent that no instruction is necessary. Flow becomes a god whose service is an elaborate land-grabbing ritual, 2. But with roads as they are, part of the countryside, the problem is to make them work by integrating instruction into the road itself by means of accepted visual conventions.



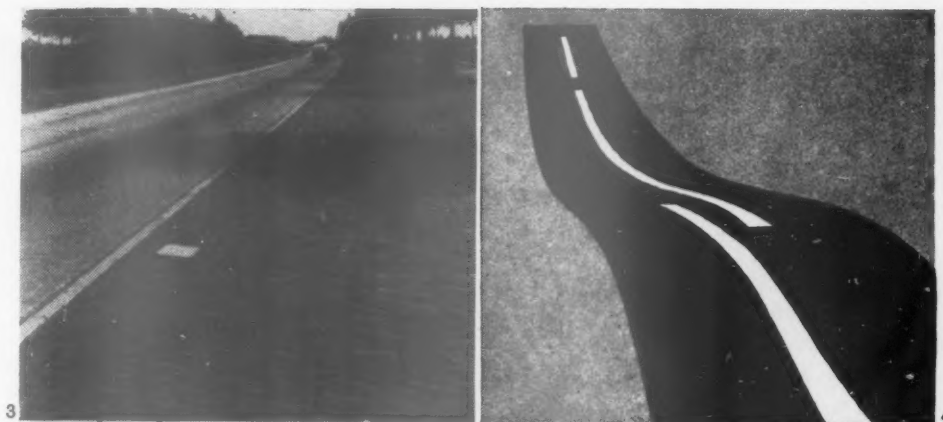
1



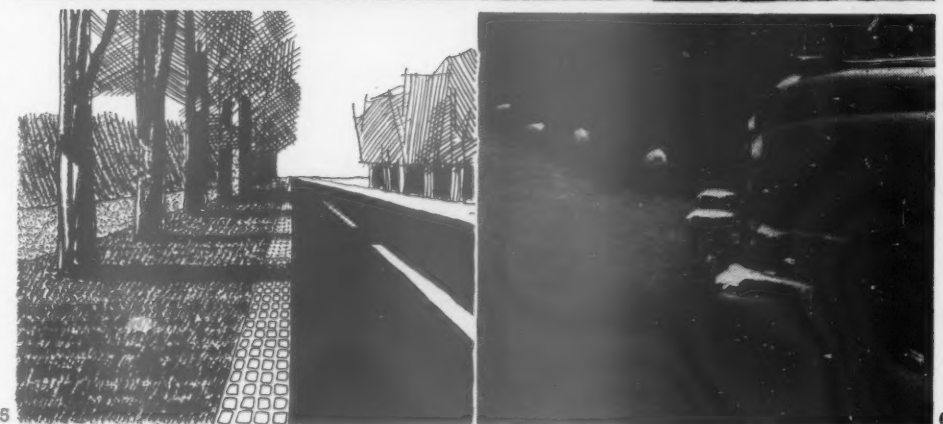
2

TRUNK ROADS AND OPEN COUNTRY

vision in motion Lying at the heart of any visual code is the ability to plan in the dimension of speed. The lay-by shown here, 3, is immensely long from the pedestrian point of view, yet at speed it drops naturally into place as an element in the continuum that you may use or not use as you think fit. The point is that visually you are given the choice. Another example, the splitting of the central white line at the crest of a blind hill, 4, tends to separate the driver from his invisible enemy.



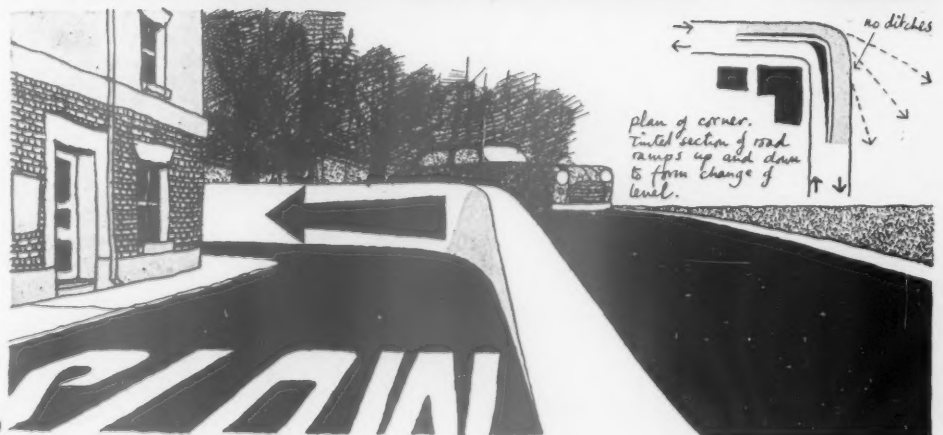
trim The edge of the road should be clearly defined, both visually and in a tactile way. The kerb not only divorces the road from the landscape but is inflexible whereas a flush margin of different texture and colour from those of the road makes the essential distinction visually (and also by vibration) whilst preserving the unity between road and countryside, 5. It also provides a 'margin' of safety. The white-washed stones shown in the more rustic example, 6, exemplify the direct approach to the problem of demarcation.



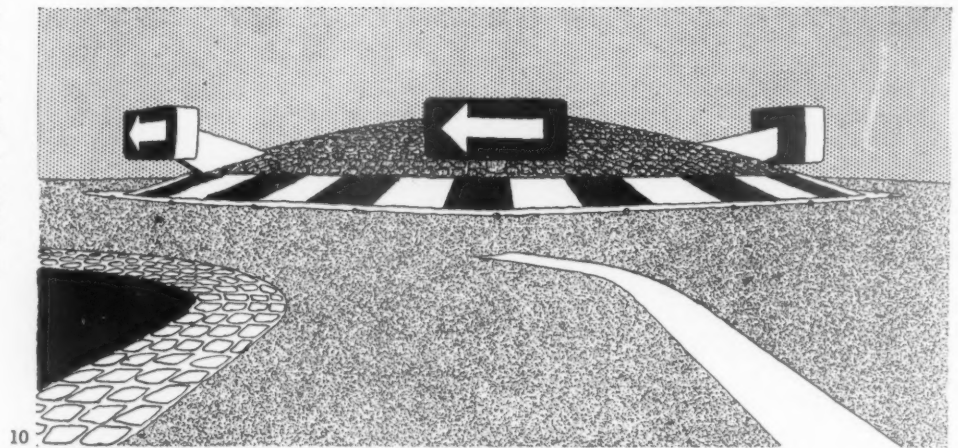
curves By demonstrating the degree and extent of the curve in the vertical dimension the motorist is presented with the problem in a clear and lucid way, 7. On the right is shown a modification in which the red reflectors are incorporated into the structure, 8, thus reducing the number of objects to be looked at. Here we see how road conditions have produced a typical highway object. It is not just a makeshift arrangement of posts and whitewashed boards, a glorified garden fence, but an object unique to the problem.



sharp curves It is often difficult to believe that some corners are as sharp as they turn out to be no matter how many or how ingenious the warning signs. The danger inherent in this hazard is that the inside driver will take the corner too wide and risk a collision with traffic approaching in the opposite direction. By a slight change of level whereby the outside lane is raised and a parapet built both routes could be effectively separated and the difference of level used to provide a large directional arrow, 9.



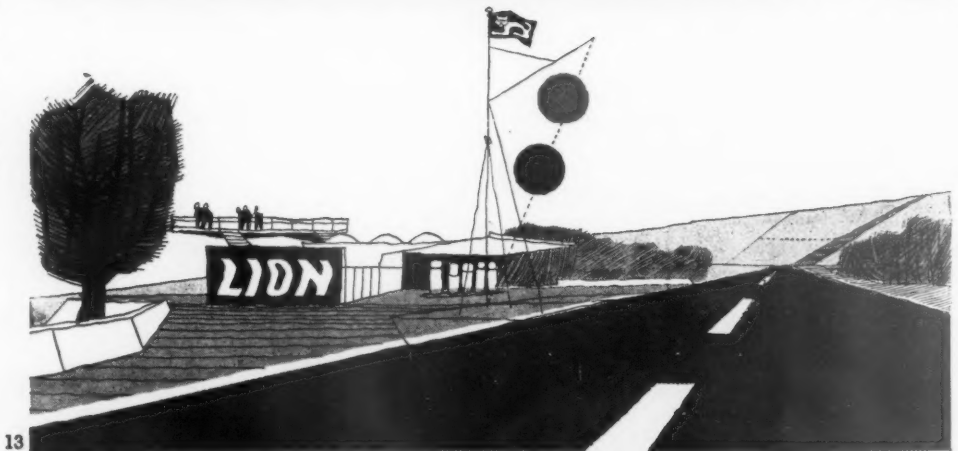
roundabouts The object of a roundabout is to make traffic weave at a crossroads. It is a large bollard, a function of the road, and as such should be immediately recognizable. To plant it with trees and shrubs, the usual practice, is to camouflage the function, thus producing uncertainty and hesitation. The glare of oncoming headlights is masked by the contour of the roundabout, which gives it its typical and recognizable shape, 10, which should be as standard as traffic lights.



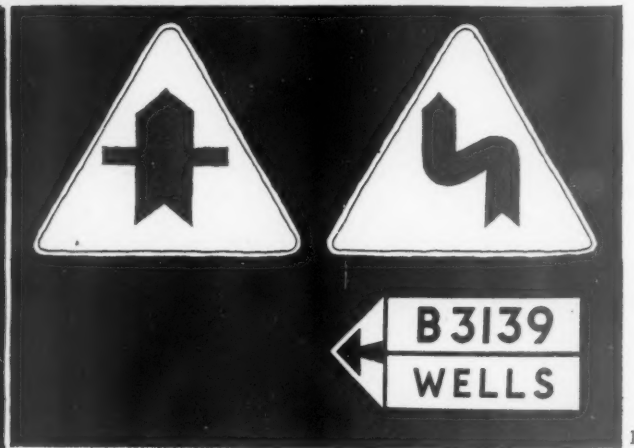
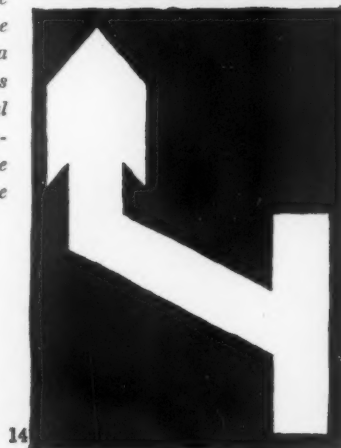
parking The preoccupation of driving demands the very simplest and most obvious arrangement if the various manoeuvres the motorist wishes to make can be carried out smoothly. In the case of parking (in common with other road services) an informative sign should be placed well ahead to give proper notice, 11. When the moment for action comes the situation is revealed in great simplicity; the road surface is continued in the form of an arrow pointing to the parking sign and the main road re-emphasized with its route number boldly painted, 12.



structures Roadside amenities, petrol stations, service stations, cafés, etc., should be clearly distinguishable from private buildings which happen to be near the road. The convention proposed here is of coloured spheres erected on a mast denoting the kind of amenity offered, 13. Thus a red ball would mean petrol, oil, etc., and a blue ball food.



signs The point has already been made concerning the inadvisability of writing the message in longhand. There are cases where a word of warning is also a symbol such as SLOW painted on the road. But in general the acceptance of graphic symbols to give warning of particular situations, such as those illustrated here, 14 and 15, would relieve the driver of a great burden.



scale The lettering here, 16, announces the name of the town in about the same size as that at the railway station. Why should it be thought vulgar on the road, but accepted by all who travel at the same speed by rail as being correct? Visibility from a distance is a prerequisite of comfortable driving, and the variations in scale which this necessitates must be accepted as one of the items contributing to a distinctive and unique road vernacular.

16



TOWN CENTRES present the problem of clarity in an acute form as the preoccupation with speed gives way to preoccupation with pedestrians, display lettering and traffic congestion, 17.



17

by-pass The first essential is to relieve those parts of the town where people congregate: the High Street and town centre. But the by-pass should not be confused with a ring road. The central by-pass has only to outflank a relatively small area and should be as close to it as possible in order that it can act as a workable alternative. The illustration shows this clearly, 18—the arched entrance to the town centre is avoided by through traffic only at the very last moment and the by-pass skirts the town walls.



18

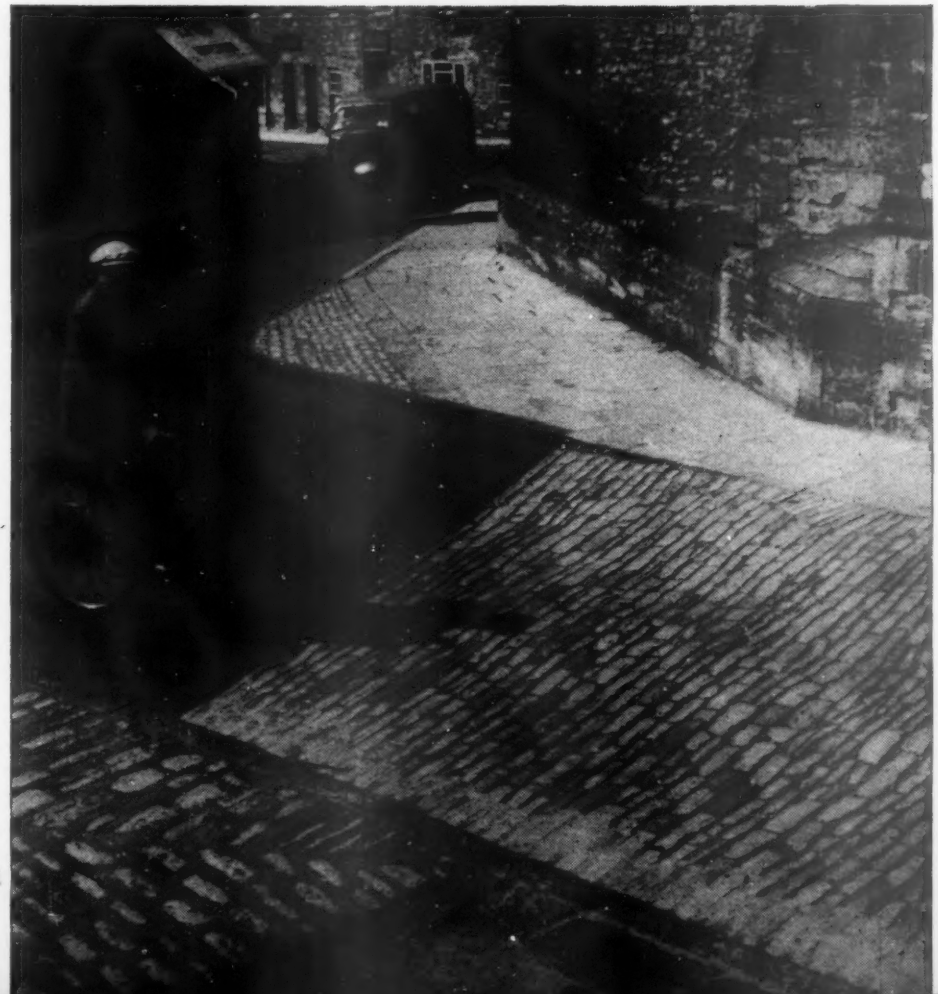
throughroads and enclaves In the case of larger towns the adoption of a precinctual system served by main roads would have the effect of splitting up the present anarchy of speed into two distinct parts. The main roads would be fast and inside the precinct there would be a speed restriction of 8 or 10 m.p.h., thus allowing the pedestrian to move freely. The illustrations show, first, a bird's-eye view of the sort of traffic pattern this would entail, 19, and, second, a view inside the precinct in which the road surface is deliberately rough and uneven to help reduce the speed of vehicles, 20. Below, the beginning of a visual urban convention for the regulation of traffic and pedestrians, 21. Without any written instruction it is clear that the rough and smooth textures of the road surface have a concise meaning. This part of the road is vehicular priority, that part is pedestrian priority.



19



20

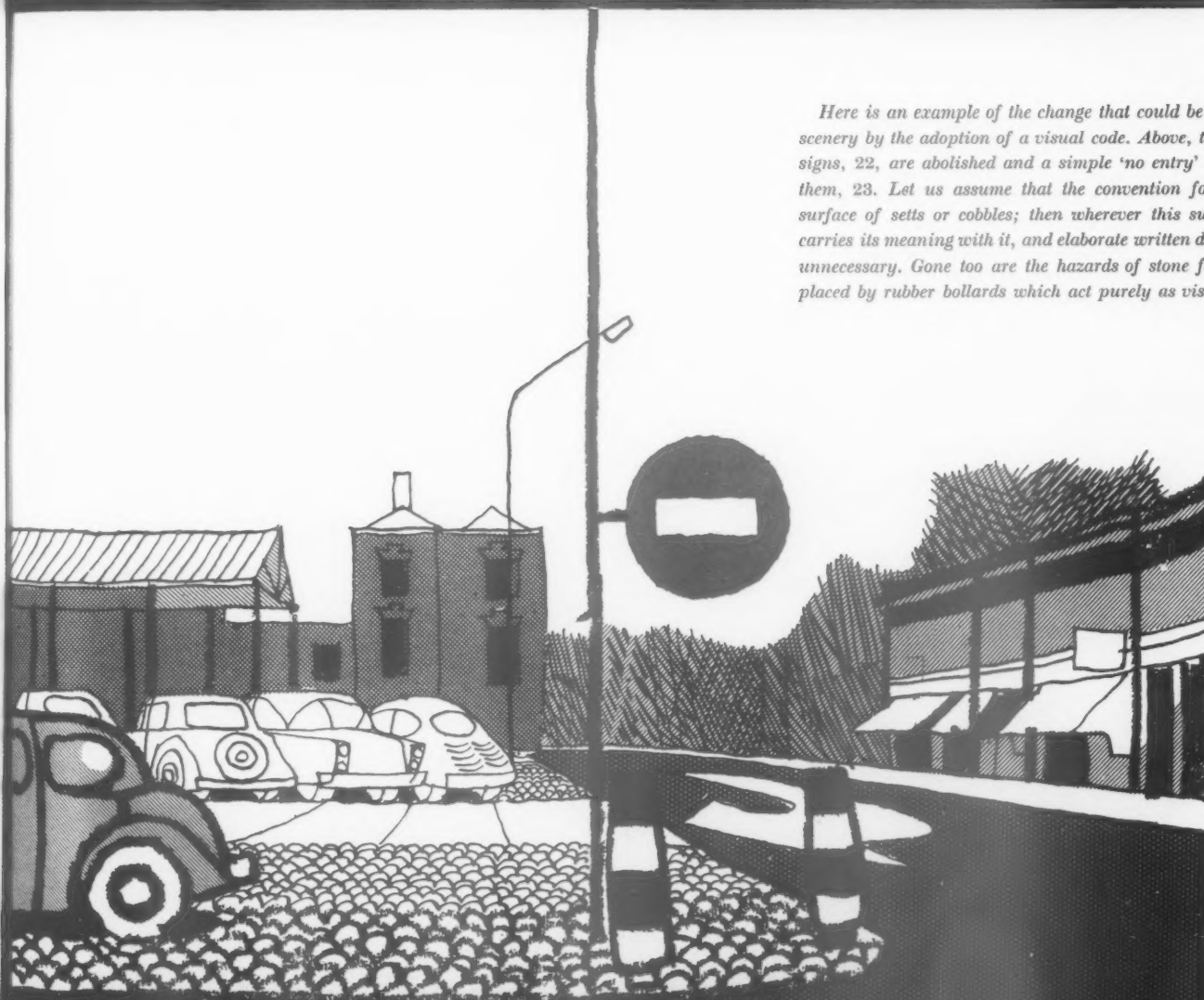


21



22

Here is an example of the change that could be made in urban scenery by the adoption of a visual code. Above, the contradictory signs, 22, are abolished and a simple 'no entry' symbol replaces them, 23. Let us assume that the convention for parking is a surface of setts or cobbles; then wherever this surface is met, it carries its meaning with it, and elaborate written directions become unnecessary. Gone too are the hazards of stone fencing to be replaced by rubber bollards which act purely as visual boundaries.



23

STORE AT SOUTHAMPTON

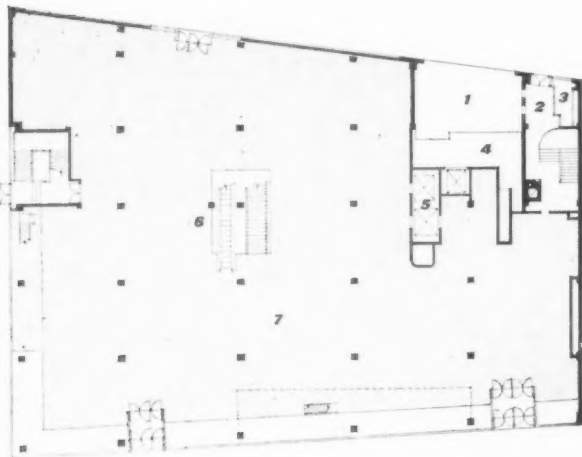
- | | |
|----------------------|------------------------------|
| key | 10. void. |
| 1. delivery. | 11. counting house and other |
| 2. staff entrance. | light-partitioned offices. |
| 3. watchman. | 12. restaurant. |
| 4. loading platform. | 13. kitchen. |
| 5. lifts. | 14. staff rest-rooms. |
| 6. escalator. | 15. staff dining room. |
| 7. sales areas. | 16. managerial offices. |
| 8. fashion workroom. | 17. workrooms. |
| 9. hairdressing. | 18. terrace. |

At the bottom of this page is shown the layout of the buildings and streets surrounding Tyrrell and Green's store (dark shading). Across Bar Street from the store frontage is a pedestrian piazza beyond which is the Civic Centre (pillared front). The buildings indicated by broken lines are existing but due for demolition; the shaded line crossing their site indicates the future building line.

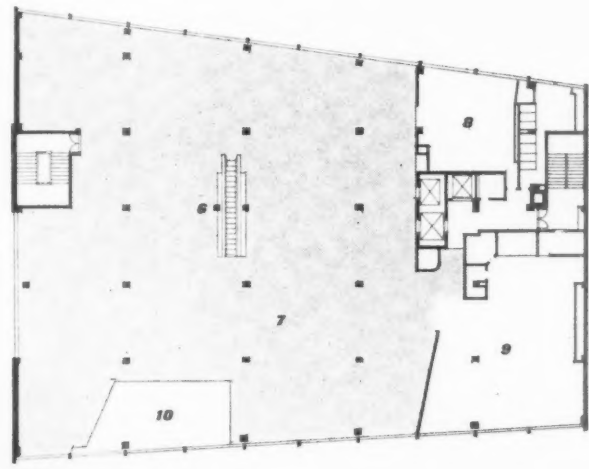


second floor

50 40 30 20 10 0 10
scale of feet

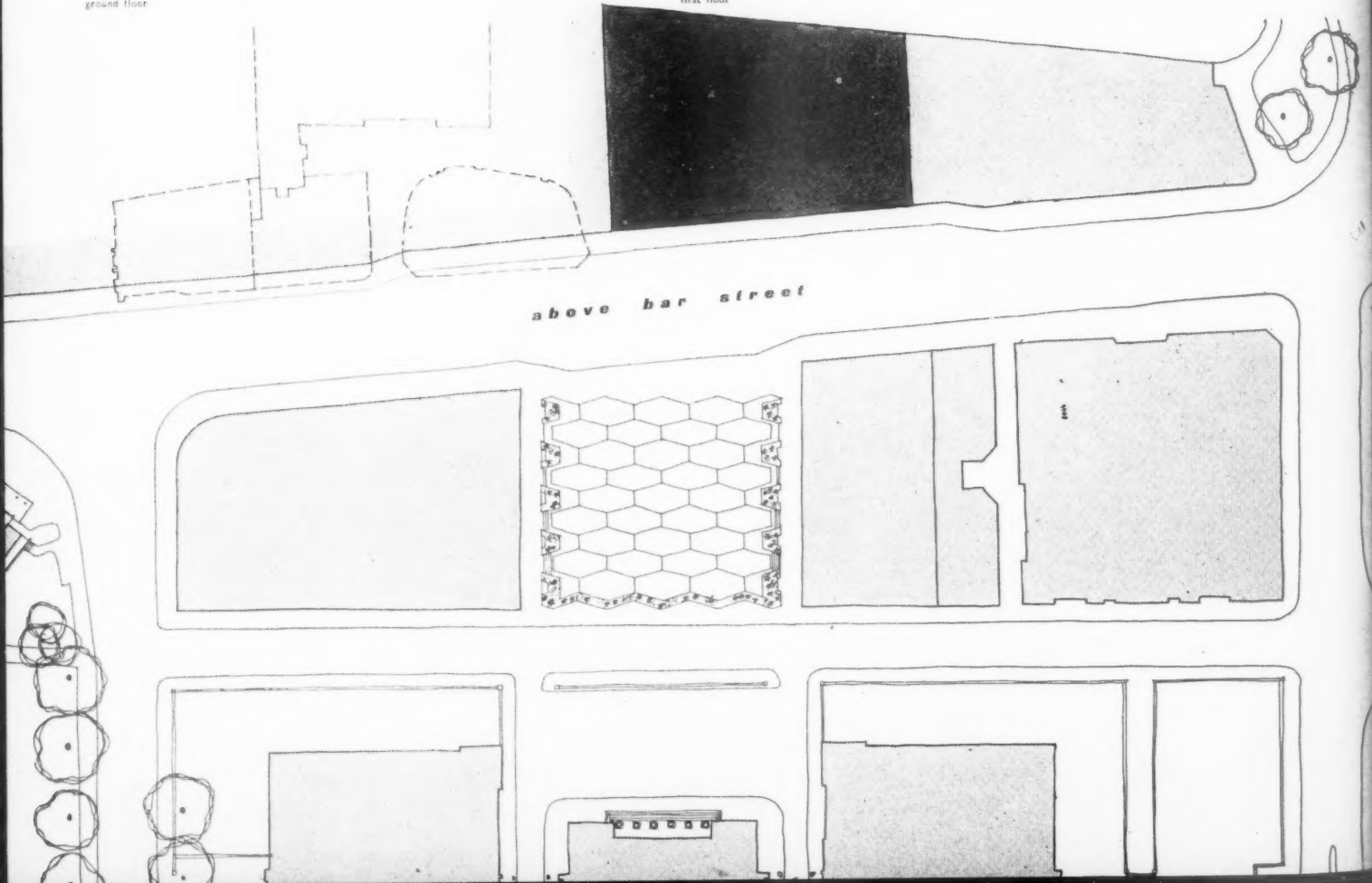


ground floor



first floor

above bar street



STORE AT SOUTHAMPTON

ARCHITECTS
associate architect
architect-in-charge

YORKE, ROSENBERG AND MARDALL
John R. Penoyre
Jack S. Snell

1, frontage to Above Bar Street, facing west.



The site of this store for Messrs. Tyrrell and Green is in an important position on Above Bar Street, with a frontage of about 175 ft., and it will form part of the east side of the new Guildhall Square to be created in front of the Civic Centre. The original buildings on the site were destroyed by bombing in 1940 and a tem-

porary store was erected. The building has been completed in two stages: the first, on the part of the site not occupied by the temporary store, which had to remain in operation until the completion of Stage 1, and the second, the demolition of the temporary store and completion of the new store. Each stage took about



2

2. detail of west front. Mullions and cornice are Portland stone, panels between windows Westmorland slate. 3. East Park elevation (east); infill panels are of exposed aggregate concrete. The second floor, yet to be built on this side, will continue the treatment of the first. 4. stair from ground floor to basement with open risers and treads hung from steel strings. 5. the restaurant, walled in Columbian pine.

3



a year, the second being completed in May this year. Provision has been made to extend the second floor over the terrace on the East Park side and to add one more floor over the whole site. All the services, the lifts and mechanical plant, and the depot for receiving and despatch of goods are concentrated in the south-east corner. The rest of each floor is thus left clear for sales areas, storage of stock, the public restaurant, hairdressing department, etc.

The construction consists of a steel frame, with hollow tile floors. The elevation to Above Bar Street has Portland stone mullions and cornices with Westmorland slate slabs between windows. That to East Park has Portland stone mullions and cornices with exposed aggregate concrete slabs, which will be extended to the second floor when it is built, and tiling at street level. The elevation to Prospect Place, of panels of patterned brickwork and exposed aggregate concrete slabs, is mostly a party wall, but it is unlikely that the adjoining building will be rebuilt in the near future. The main windows on all elevations on the upper floors are aluminium vertically-hung sliding sashes in steel frames; the system of wires and weights which operates the sashes is so arranged as to ensure that the breaking of a wire will not result in sudden closing of the sashes.

There are three staircases. The central stair from the ground floor to the basement sales area has open risers and an open well allowing views of the basement from above, and is constructed on steel strings with teak treads suspended from their underside. A main staircase to the sales areas of each floor on the north side of the building, which also acts as a means of escape, is in





6

STORE AT SOUTHAMPTON

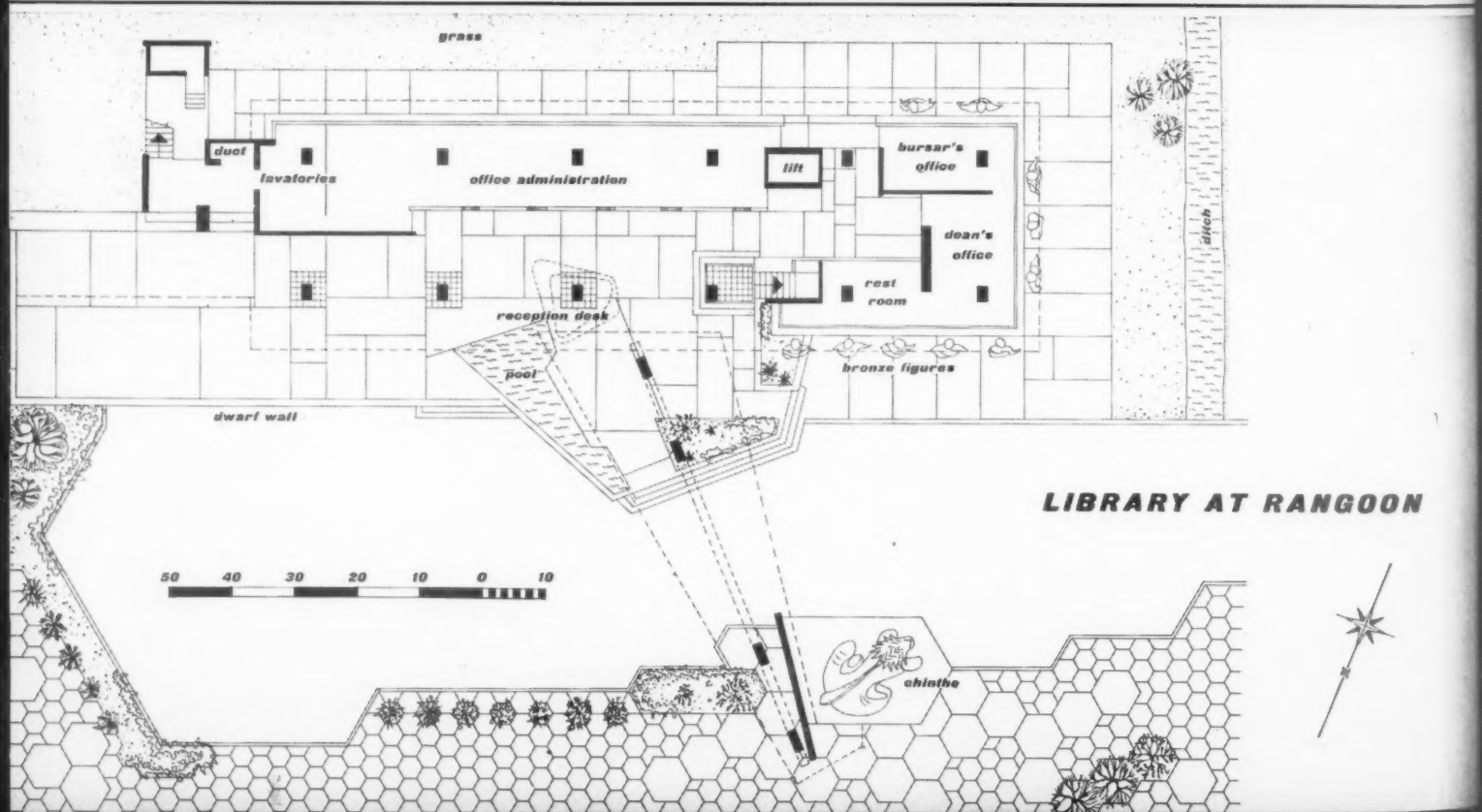
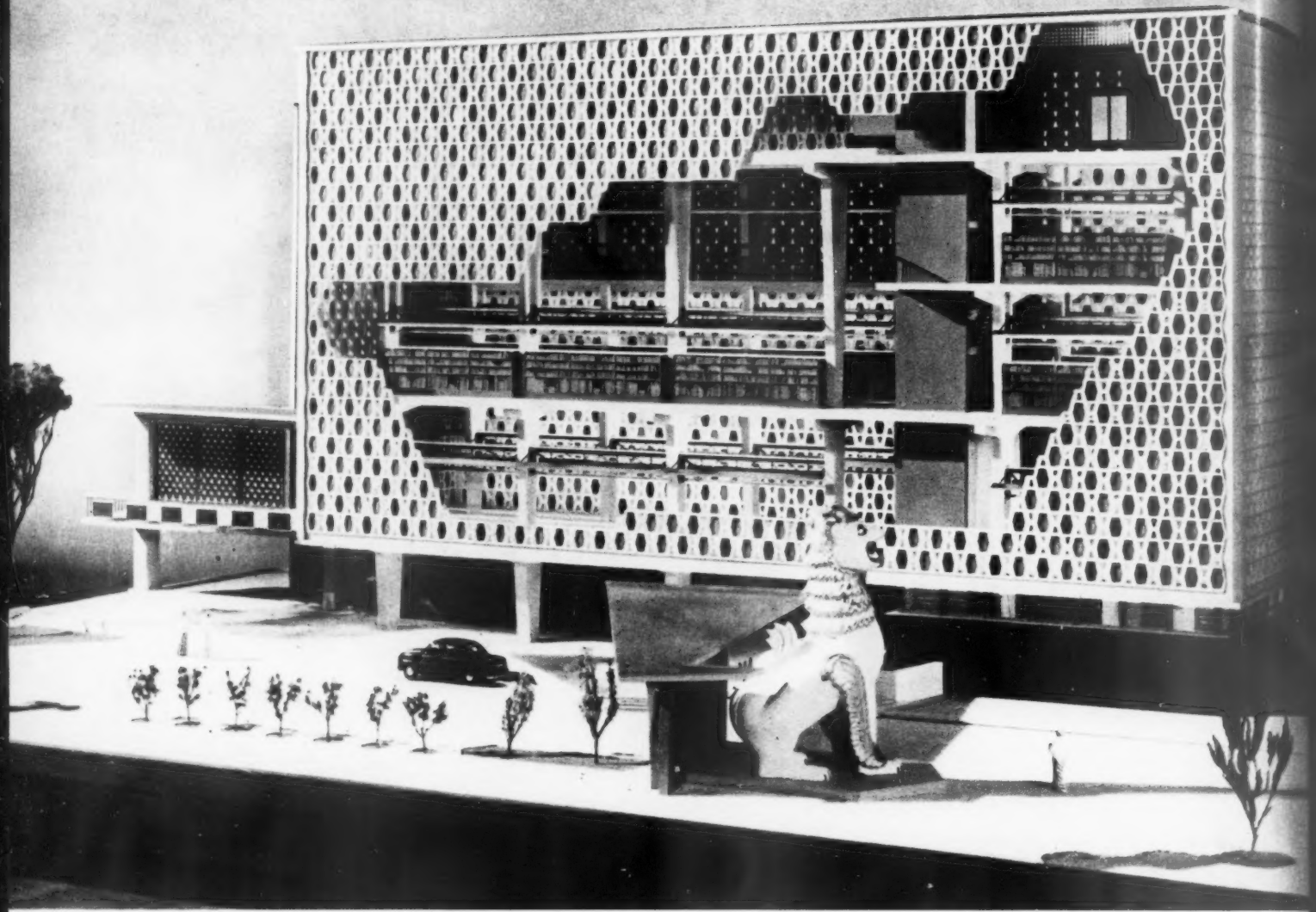
terrazzo with terrazzo slab treads. The balustrade to both these stairs is in simple vertical, bright drawn, steel members painted eggshell black with alternate members having stainless steel sleeves; the handrails are teak. The third staircase, for the use of staff only, is in grano', with quarry tiles on landings and with simple mild steel balustrade and handrail. Interior furnishings and colour schemes were designed by the John Lewis Partnership.

Heating is by embedded ceiling panels. There is complete air conditioning in the basement and kitchen and extract ventilation in other parts including the restaurant and hairdressing departments.




6 and 7, the north side, containing emergency exit and customers' entrance. Plans for rebuilding the facing site have not yet been made; one or both of the patterned brick walls may become a party wall.

7



LIBRARY AT RANGOON

 Facing page, a model of the library building, and below it a plan of the ground floor. The library itself is in the centre, occupying the second and third floors; the students' common room occupies the same space on the first floor. In the screen, the large coffin-shaped openings are glazed; the pairs of smaller openings are unglazed. The plans of the other floors are overleaf.

LIBRARY AT RANGOON

ARCHITECTS

Assistant Architect

Site Architect

RAGLAN SQUIRE AND PARTNERS

R. B. Roberts

B. C. Adams

The library will bring the buildings of the college of architecture and engineering at the University of Rangoon a step nearer completion. The project for the college assembly hall was illustrated in the November, 1955, issue of the REVIEW.

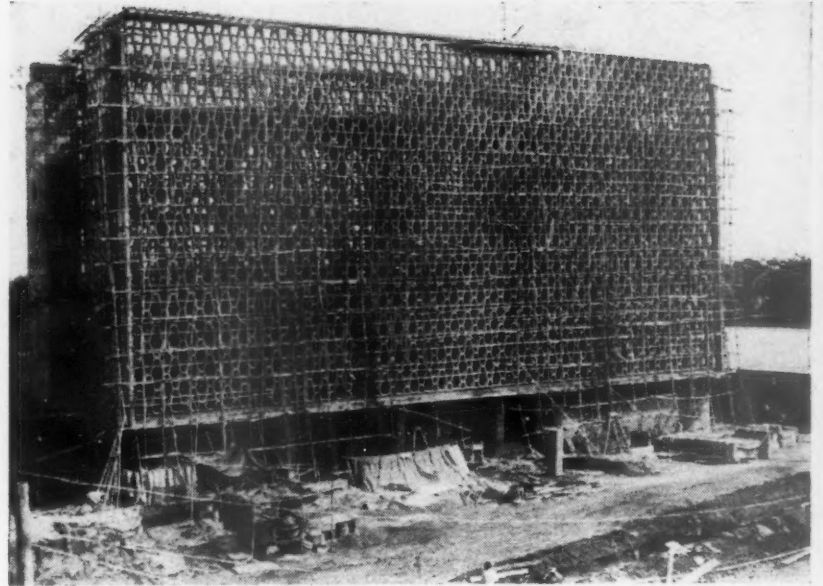
The plan for the building (which will contain besides the library certain administrative offices) follows that of a traditional tropical bungalow, which comprises an inner central living area surrounded on all sides by a deep verandah as protection from sun and rain. Sometimes these verandahs are partly enclosed by grilles which tend to disperse the sun's rays, thus making the verandah an extension of the internal living space. The library building is derived from this simple prototype: a rectangular area sealed off by glass screens and surrounded by an open grille, an arrangement which, except for the ground floor office accommodation, will be common to all four floors, a reticulated grille being stretched over the entire superstructure.

A decision to abolish the enclosing glass screens protecting the inner areas and rely for sun and rain protection on the grilles led to the final grille form of the deep coffin-shaped unit with a central hexagon glazed and the two small fan-shaped openings unglazed. Permanent cross ventilation was permitted by the unglazed openings. The pattern of the glass in-fill panels is based on the traditional folk patterns of the Shan States in Northern Burma, and has been designed to emphasize the essentially diagonal character of the grille. The Library itself is provided with teak book-stacks with slatted shelves to permit the free passage of air circulated by heaters in the bottom of the stack.

The structure consists of multi-storey reinforced-concrete portal frames with cantilever arms, and flat slabs spanning 21 ft. 8½ ins. from frame to frame. Grille walls consist of precast coffin-shaped concrete

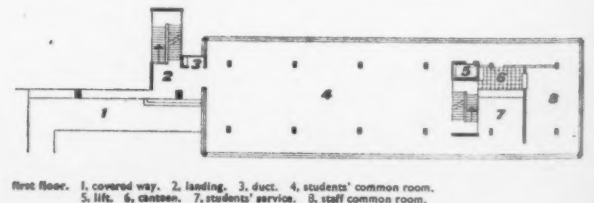
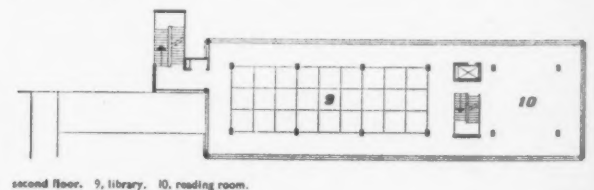
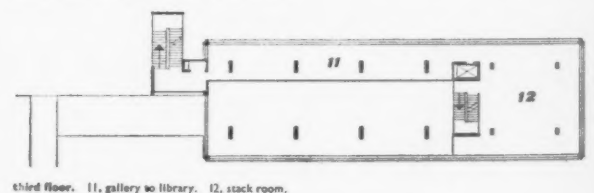
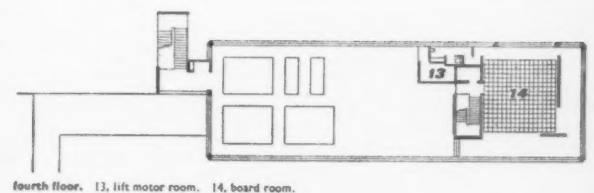
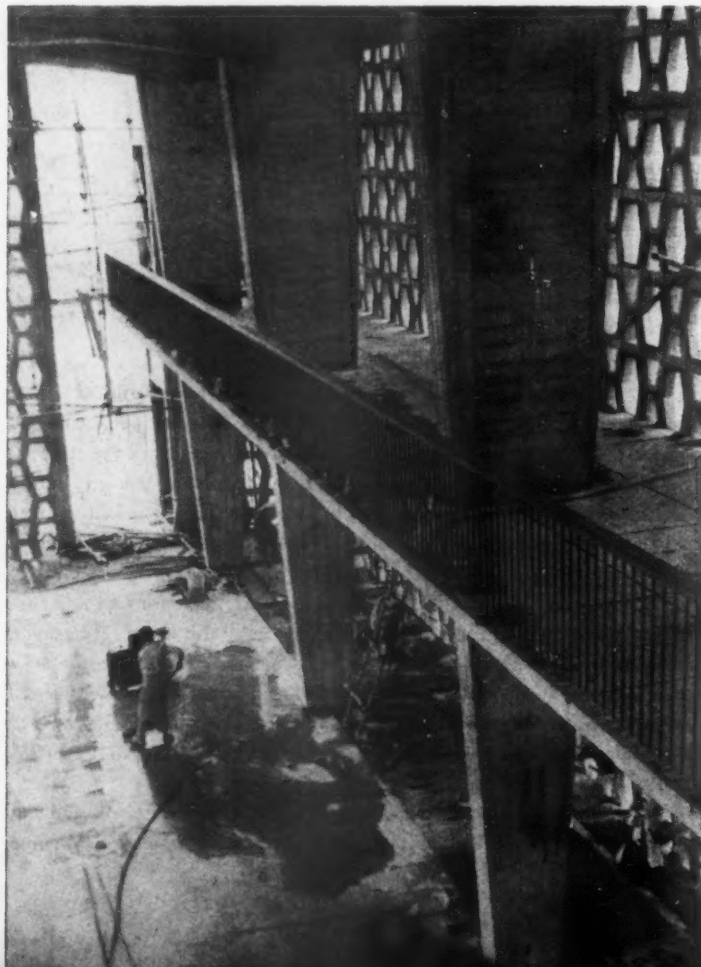
1, a progress photo of the north (entrance) face, with the screen in position covering the four upper floors; it runs round all four elevations, excepting where the external stairway occurs on the east.
2, interior of the library; on the right is the reading balcony, situated at third floor level.

LIBRARY AT RANGOON



units, 5 ft. high and 10 ins. deep, resting on a continuous edge beam at first-floor level. Coffin units are provided with holes at intermediate bar levels through which rods are passed for fixing to corner posts. The grille is held back at floor levels by metal fixing devices which hook over rods threaded through the coffins. All structural concrete work, including coffins, is to be left exposed, shuttering to columns and slabs having been designed to form simple patterns on the concrete. The lift shaft and internal division walls are plastered and painted. The circumscribing wall on ground floor is of black granite, and the floor and walls of the board room are marble.

A series of five portraits of eminent Burmans designed by Burmese artists and executed in coloured glass is to be contained in a black glass teak screen on the ground floor. The Chinthe, a mythological beast, is to be constructed in the traditional Burmese manner in brickwork plastered and painted.



current architecture recent buildings of interest briefly illustrated



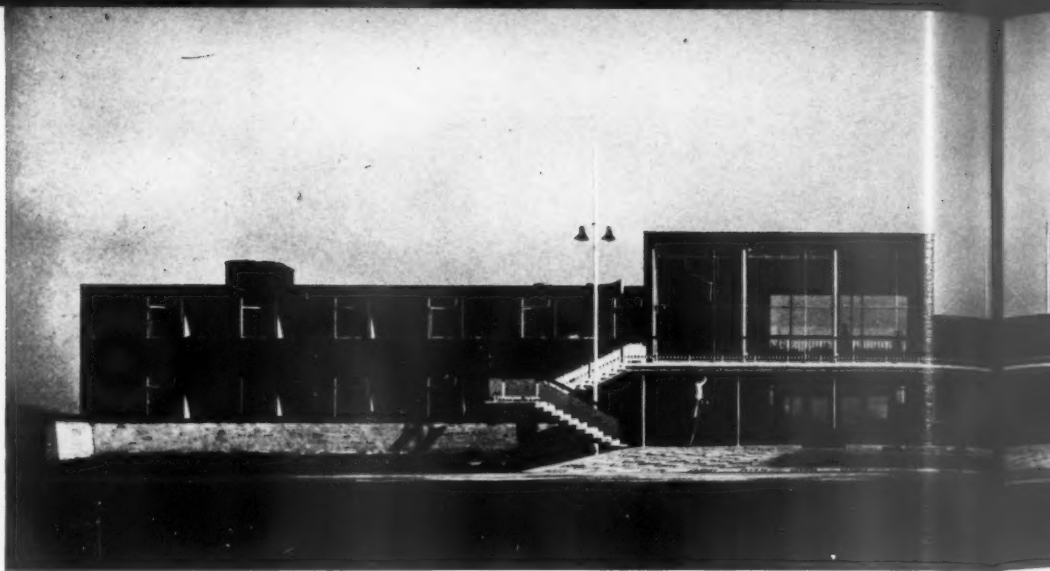
TURNHOUSE AIRPORT, EDINBURGH

ARCHITECT, ROBERT H. MATTHEW
CHIEF ASSISTANT ARCHITECT, T. R. SPAVEN
ASSISTANT ARCHITECTS, J. D. DUNBAR-
N.ASMITH, MARGARET BROWN

1, concourse and exit doors from the west. The recessed tungsten lighting gives a brilliant effect at night.

Turnhouse became the civil airport for Edinburgh in 1947, having previously been an RAF station. In 1955 it handled 70,000 passengers; as this figure is on the increase, the new terminal has been designed for easy extension in future. The site is alongside the main Edinburgh-Stirling road. The structure is steel-framed, for purposes of both economy and flexibility; for the same reason timber is the main cladding material. The roof, which has a 5° pitch, is of aluminium laid on roofing felt and boarding fixed to timber rafters on reinforced steel purlins. Generally, from the foundations to 3 ft. above ground

2, a general view of the terminal from the airfield side.



Turnhouse Airport, Edinburgh



3

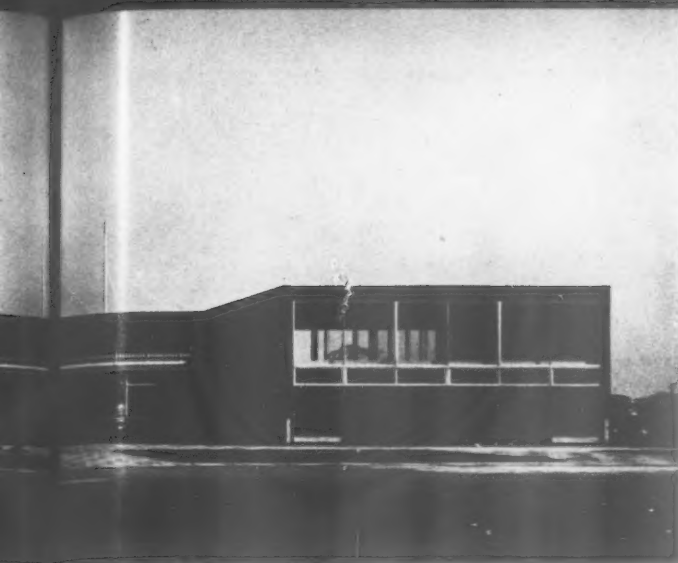


4

3, the staircase from the concourse to the buffet and bar. 4, the entrance doors on the east side, with loudspeaker housing over.



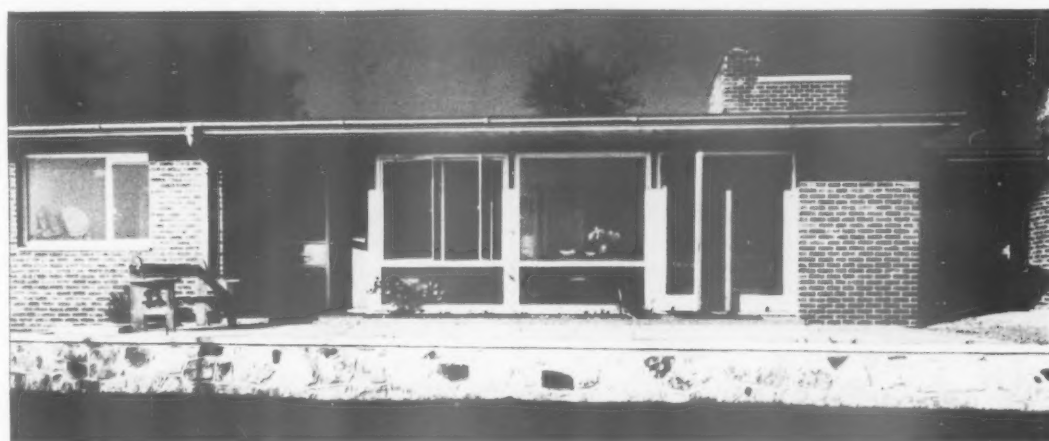
there are walls of natural sandstone or pulverized fuel ash with brick facing. The area between the concourse and the apron is paved with granite setts (obtained from Edinburgh Corporation, who are pulling them up from the city streets) laid in alternate panels with pre-cast concrete slabs. The external staircase, ascending from this area to the terrace, has a reinforced concrete spine and hardwood treads; that in the concourse is of the same construction. The windows in offices and corridors are treated as panel infilling between stanchions; this simplifies construction and gives glare-free lighting. The large window walls have pressed aluminium surrounds; smaller windows have hardwood surrounds; all are in aluminium sections. South-facing windows



have Venetian blinds. Internal partition walls are 3-in. lightweight concrete, finished with hardwood in the concourse, glazed tiles in the lavatories and plaster painted elsewhere. In the concourse and customs are timber-framed inner skins of 1-in. tongued and grooved beech or mahogany boarding on softwood framing. The concourse ceiling is of acoustic tiles secret-fixed to aluminium T-sections; elsewhere ceilings are insulation board similarly fixed. Little coloured paintwork has been used. All built-in furniture and layouts for GPO letter-boxes and 'phone booths, newspaper kiosk, etc., were designed, and furnishings and loose furniture were selected by the architect.



5, the concourse from the entrance doors. The ceiling is of acoustic panels painted white.



6, part of the south front with the main entrance, living-room windows and covered way leading to the garage.

HOUSE AT MEREWORTH, KENT

DESIGNED BY JEREMY B. LOWE

EXECUTIVE ARCHITECTS, RAMSEY,

MURRAY, WHITE AND WARD

The house, at Baron's Place Farm, Mereworth, had to contain as few steps as possible and give the minimum of housework. It was also planned so that from the living-room and all the bedrooms the good view of the Weald could be enjoyed. The roof is low pitched and is covered in 3-ply bituminous felt. The ceilings are low, but some follow the roof slope. Heating is by $\frac{1}{2}$ -in. bore pipes encased



House at Mereworth, Kent

in a composition sheathing and embedded in a 3-in.-thick floor screed, served by an oil-fired boiler. The 600-gallon storage tank is placed east of the garage, with the feed line buried under the garage floor; the oil burner has a clock control.

7, general view from the south.



HOUSE AT HAYES, KENT

ARCHITECT, D. R. HICKMAN



8

Although this house, in Warren Road, Hayes Common, is designed by the architect for his own occupation, it is looked upon by the contractors, Heals, as a prototype for further ventures in domestic building: Heals also hope it will arouse interest in good design and be economical in structure so as to leave more money for equipment and finishes. The site is one-fifth of an acre. The foundations consist of three straight strips: the two flank walls carry all the loads of the main block, the other walls being non-load-bearing and so requiring no foundations. The first-floor gable-ends are designed as trusses, spanning from wall to wall so that the 15 ft. 6 in. wide living-room window needs no lintel. Much dry construction has been used; for example, hardboard and insulating board ceilings, the first-floor partitions and the timber gable end walls. For insulation, the inner skin of cavity walls are of load-bearing insulating blocks and the living-room windows are double-glazed. The first floor is of secret-nailed deal strip; the staircase treads are Japanese oak.

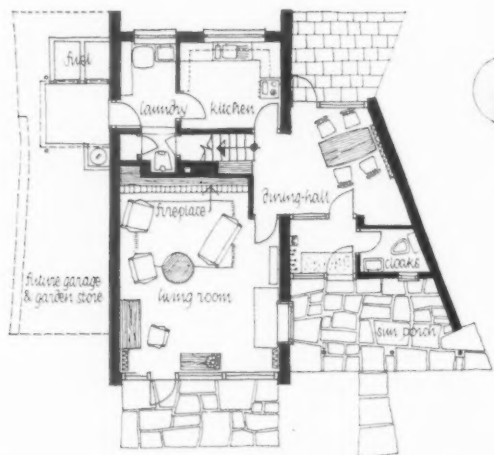
9



8, the house from the south-east; 9, from the north-east. 10, the staircase and the kitchen beyond. 11, the dining hall, showing clerestory lighting and the glazed screen to the entrance lobby.



first floor

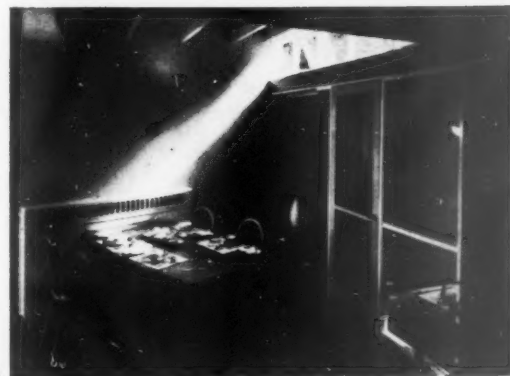


ground floor

scale: 1/16 in. = 1 ft.



10



11

HISTORY

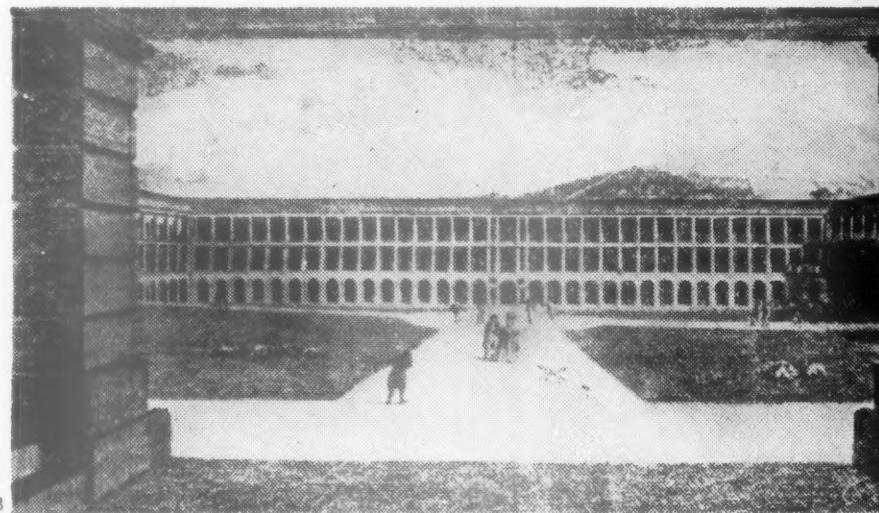
PIECE HALL, HALIFAX

'Contented with ornamenting the inside, they have left the outside without the least bit of pillar, pilaster, window-ornament or break of anything except the front and entrance of the building. Think how queer one hundred yards of stone wall presented to the eye'—these words, which might suggest a neo-Classic fantasy of Ledoux or Boullée, in fact describe a building in Halifax quite un-fantastic in intention, though remarkable in form, the Piece Hall.

The remarkable form consists of a plan



in the shape of a hollow rectangle 330 ft. by 273, surrounded by loggias three storeys high for half its perimeter, and two storeys high for the rest, 1. The full order is Roman Doric columns over rustic piers, and the loggias, 2, serve as access galleries



to 315 'closets' or small rooms, in which as many clothmakers could display their piece goods. The building was begun in 1774 to the designs of Thomas Bradley, of whom little else is known beyond the facts that he designed Crownest House in 1788 and was engineer to the Calder and Hebble Navigation.

The Piece Hall as a building type is a product of the needs of one particular corner of the West Riding, where the prevalence of small domestic manufactures of high quality cloths produced a need for a special type of marketing facility. Halifax pioneered the type as early as 1700, Wakefield followed in 1710 and Leeds soon after. The first Leeds Piece Hall was thus

described by Thoresby: 'Tis built upon pillars and arches in the form of an exchange with a triangular court within; both the higher and lower stories are replenished with that sort of goods that till this juncture the clothiers had to carry samples of to each of the merchants' houses.' This Leeds 'White Cloth Hall,' so called after the colour of the cloth, was replaced in 1755.

In 1768 Huddersfield received its Piece Hall, and this was not rectangular but oval. It was enlarged in 1780 and, in spite of the fact that it was easily the most interesting building in Huddersfield, pulled down in 1930 to make way for a cinema. Fragments have been re-erected in a public park. On the pattern no doubt of Huddersfield, Halifax intended at first a circular Piece Hall. But the scheme was rejected by the subscribers because it would have wasted part of the available ground.

In 1773 Bradford followed Huddersfield; but their Piece Hall was a simple oblong house with a large room downstairs and another upstairs.

To the year 1774, apart from Halifax, belongs the third Piece Hall, at Leeds. This, whose commencement was the immediate cause for Halifax to make a start, still survives in parts. It was also built like an exchange round a quadrangle; but it was of one storey only and goods were displayed on stalls arranged in five long streets in the quadrangle.

Finally, after Leeds III and Halifax, Colne built a Piece Hall in 1775, and Wakefield replaced its old building in 1776. Of all these halls none was so striking as Bradley's at Halifax, and none survives so completely to this day—though the wide lawn of the quadrangle has been asphalted over, the lower colonnade blocked-in and the whole reduced to a fish and vegetable

market. Nevertheless, from some views, and under certain special conditions (as when the quadrangle is cleared for the great choir-festivals or 'Sings') the hypnotic rhythm of the repetitive colonnades can still be appreciated as much as it can in early prints of Piece Hall when it was new, 3.

S. Lang

EXHIBITIONS

PAINTING, SCULPTURE AND STAINED GLASS

Eight small medieval paintings which have long been suffering from neglect in the darkness of St. Michael-at-Plea, Norwich, are enjoying a period of convalescence in a well-lighted corner of a gallery in the Victoria & Albert Museum, after drastic operations carried out in the Courtauld Institute, and before returning to their religious duties at St. Michael's, where some of them will be used as a reredos for the altar.

They are the remains of three large groups of paintings—two altarpieces and a chancel screen—which once adorned this small East Anglian church, and they provide a haunting glimpse of the vanished splendours of our fourteenth- and fifteenth-

century ecclesiastical interiors.

Pamela Tudor-Craig, who contributes a scholarly introduction to the catalogue, argues that the panels cover the period c. 1385–c. 1440, and that each group yields evidence of a different phase of foreign influence. In the last of the panels, a Resurrection, the conventional gold background is replaced by a dawn sky which reflects Flemish influence, and the prototypes for the soldiers have been found in German panels painted in the same decade. (Much the same kind of eclectic picture-making goes on today: obvious examples were to be seen in a show of English abstracts reviewed in my last article, where broad oblongs of paint applied in the manner of Soulages were allowed to drip at the ends in the manner of Jackson Pollock.) The Crucifixion panel reproduced here, 1, is from the earliest group at St. Michael's, and shows Italian and Bohemian influences. The Italianate St. John seems more alien to the general conception than the Northern Gothic Virgin; he brings about a sharp drop in the emotional temperature which, if I may be forgiven for admiring the picture in its present state, is stepped up again by the fervent iconoclastic scratchings on the mourners at the foot of the cross. The raised plant stems, tearing like tipsy snakes round the haloes and the angels catching Christ's blood in goblets, and squeezing themselves between the main figures, add a special note of animation to a kind of gilded relief background which more often than not is a deadening display of craftwork.

Six of the 70 ft.-high stained glass windows that are being made at the Royal College of Art for the nave of Coventry Cathedral have been exhibited at the Victoria and Albert in a darkened gallery, accompanied by the sound of religious music. They were cunningly arranged in a confined space to emphasize their Gothic verticality and convey through physical sensation the idea of the human spirit soaring to glowing heights. The effect was impressive, and the showmanship would have misfired if the windows themselves had failed to come up to expectations.

The artists responsible for the windows—Lawrence Lee, Geoffrey Clarke and Keith New—seem to have re-discovered the vitality and expressiveness of stained glass by separating the functions of line and colour. Each window has a predominant hue, a molten gold or red, a rich viridian or a sultry purple; and the complex linear design is like a mass of black, wet twigs thrown on to a fiercely burning fire. By operating as an obstruction for the colour to smoulder under and lick round and jet through, the nets of black line cause the colour to look as active as flame.

The nets of black line also serve a complicated symbolism, and pile up the emblems with fantastic prodigality. One's eye detects shapes like bishops' croziers, sting-rays and sun-bursts, corals and plants, window-cleaners' ladders and ships' rigging; there are crowns and sceptres in quantity, shoals of eyes, a profusion of arrows, and, every so often, a small human figure, which emerges for a moment like a pygmy in the jungle before dodging back into the tangle. Part of one of Keith New's green windows, 2, gives some idea of the clotted linear texture, but the most beautiful and mysterious windows in the exhibition were the two by Geoffrey Clarke, probably because they are the



1



2

least transparent: their dark purples and purplish blues and bluish greens obscure the emblems and bruise the light, and, as Clarke himself hoped they would, 'create a deep, pulsating atmosphere,' filled with vast, vague implications. Mention should be made of the broad mullion which runs dead through the middle of each window. It may be a structural necessity, but in relation to the width of the windows it looks arbitrary and ugly, and if the RCA team had been thinking in anthropomorphic terms their problems would have been insoluble.

Geoffrey Clarke's colour prints, by the way, were outstanding contributions to the exhibition at Zwemmer's called 'New Editions,' where some of our best print-makers were showing recent works. His large aquatint of a quaint, moon-faced *personnage*, armed with black arrows, 3, called to mind one of Klee's gnomish utterances: 'The Father of the arrow is the thought: how do I extend my reach?' Clarke, almost too obviously, extends his

each by means of colour, and his rhetorical use of blues, blacks and greens gives his aquatint an air of sombre gravity which is not even faintly anticipated in the quaint linear figure.

The exhibition of stained glass and working drawings at the Building Centre, by members of the British Society of Master Glass-Painters and liverymen of the Glaziers' Company, contained many notable examples of craftwork in several nineteenth-century idioms, such as mock-medieval, pre-Raphaelite, sub-baroque and what might be called Victorian Dantesque, and it is evident that, if they are not too set in their ways to learn a new but fairly simple language, we have here a group of fine craftsmen capable of spreading the twentieth-century style inaugurated by the Coventry windows to every corner of the land where stained glass is needed.

To continue the discussion of the dissociation of line and colour, Wyndham Lewis is the kind of artist for whom the linear emblem has to do everything. His drawings are elegant, exact and as cold as ice; his oils are drawings with colour added as an afterthought, and because he favoured warm colours yet used them without warmth, they are an adornment that fails to adorn. Vorticism, in spite of its influence on various minor painters, was a one-man movement, and Lewis rightly claims, in his introduction to 'Wyndham Lewis and Vorticism'—the large well-documented exhibition organized by the Tate Gallery—that vorticism is what he, personally, did and said at a certain period. The exhibition makes it clear that he is a remarkable eccentric rather than a great artist, but the experiments in geometries which he made at the outset of his career can still set one dreaming of the important part he might have played in the international abstract movement if he could have disciplined his cranky intellectualism; and for me, the first number of 'Blast,' with its reproductions of untraceable works, and the brilliant attempt in the manifesto to state the case for abstract art in concrete language, was the most exciting of the exhibits. His early abstracts, 4, are suggestive of aerial views of factory buildings disposed like military formations for a complicated manoeuvre, and a sense of impending attack, of imponderable forces on the move, is conveyed by the diagonal thrust of long, narrow box-like forms, which, incidentally, pre-date the remarkably similar use of such forms by Chirico.

The rather crazy little anthology of paintings called 'Autour du Cubisme' lent to the Arts Council by the Musée d'Art Moderne, Paris, and exhibited at the Tate, reminds one of Wyndham

Lewis's reference long ago to 'ponderous painters cubing away in Paris,' but it contains none of the great cubist pictures, and tells us very little about the movement except that here and there a minor painter managed to produce charmingly decorative works in the manner of the cubist masters. The exhibition included, for instance, a handsome brown and green landscape painted by Gleizes in 1911 in the style of a 1908 Picasso, and a 1912 still life by Marcoussis, 'Nature Morte au Damier,' 5, in which he indulged in the pleasant pretence of analysing his subject-matter.

A miscellany of sculpture at the Hanover Gallery included interesting new works by

Paolozzi and Turnbull, and introduced the iron sculpture of César Baldacchini, a thirty-five-year-old Frenchman, whose



6

sensuous use of iron and delight in macabre organisms, 6, seem to owe something to the English school.

Robert Melville

OUTRAGE

COMMON GROUND

Common ground is always under attack. If the market has gone from the market place, the fact that it is an indispensable focus brings no relief for the rates. It doesn't even contain the recognizable



5



1 2
3 4
5 6

gymnastic apparatus and careful gardening of an 'amenity.' Without such venerated symbols its value must be almost unintelligible to the average council: 'it must be put to some good use at once.'

That is fair enough, if the use to which it is put doesn't affect the more important purpose of being the centre of the town. The use is nearly always parking for vehicles; and that it can be done without fuss is shown at Pontoise in the Île de France, 1, where the simple raised kerb makes signs or wire unnecessary. When the cars go away, the space comes back—a fair compromise. But once buildings or some shrubs or a few redundant signs squat in the square, the space has gone for good, and here are two East Anglian examples to prove it. Whether the buildings are chirpily 'modern' like Loddon, Norfolk, 2 and 3, or gruesomely 'traditional' like Beeches, Suffolk, 4, the result is the same; if they are stuck in the middle instead of being dovetailed into a corner, the result is inevitable and irrevocable erosion. You can't see that Loddon has a centre and you can hardly even walk across Beeches Old Market without running under the wheels of the 5.30 to Harleston via Bungay. The photographs prove once again that it doesn't matter if the trim is dreary asphalt, like Beeches, 5, or 'improvement' shrubbery, 6, like Loddon; it will still accentuate the mess and not alleviate it. If we were town-proud it would be self-evident that a town's central space is its most important corporate possession, and it is natural to keep it clear of refuse. But our towns have become vast public conveniences, a set of services to be used and then shunned in a headlong flight—which, by a metaphorical paradox, has led us into befouling the countryside as well.

Ian Nairn

common ground



CASA, PIAZZA—BELLA FIGURA

ITALY BUILDS. By G. E. Kidder Smith. Architectural Press. £2 16s.

Mr. Kidder Smith set out to achieve what seemed to be the impossible—an analysis of Italy's architectural heritage and her amazing post-war renaissance in the compass of 264 pages; in fact he has achieved a brilliant success. After a brief analysis, beautifully photographed and selected, which brings home to the reader the extraordinary variety of the Italian landscape and climate, and their influence upon the indigenous architecture, Mr. Kidder Smith goes straight to the heart of the matter in his descriptions of the historic piazzas of Italy—Siena, Venice, Orvieto, St. Peter's, and of the smaller but no less notable ones of Portofino and Capri. He points out that Italians have the smallest bedrooms in Europe because they have the largest parlours, in the original latin sense of the verb to speak.

The street, and especially the piazza, have from time immemorial performed this function for the people who inhabit the Italian peninsula, and have been the central motif of their pattern of life. They are the setting of the *passaggiata* in the cool of the evening, their bars are the meeting places for diversion and the discussion of politics—they were as notable a feature of Pompeii and Ostia Antica as their brilliantly vivacious counterparts are of the post-war architectural renaissance—housewives sit out in the street to mend and prepare the vegetables, and in the hot summer evenings they gather for a gossip round the fountains, just as in winter they seek the shelter of one of those beautiful sunlit street staircases for giving the children an airing.

In his commentary on this way of life and the superlative use of space, changing levels, sculpture, fountains and other street furniture which it has produced in Italy in the past, and in his admiration of contemporary architectural brilliance, Mr. Kidder Smith has not failed to point out how woefully, by comparison, Italian urban planning has failed in this respect today. He states flatly that 'there are no qualified planners as such,' nor does he mince his words when he describes the new suburbs of Italian cities as 'a godless, soulless, series of residential slums, devouring the countryside as they advance like a phalanx on the nature about them. They are a disgrace to the country, its planners, its architects, and its people' and he might have added that in Rome this applies to the so-called luxury districts as well.

It is a relief to turn from this uncompromising, but truthful, description of the worst

aspects of Italy's really magnificent work of reconstruction, to the superb achievements of her best contemporary architects. This, in contrast to Sweden's general level of 'collective excellence' Mr. Kidder Smith describes as 'studded with stars in a morass of the mediocre.'

Their love of the visual aspect of things has created in the Italian mind an admiration for external beauty in people and buildings which is largely foreign to the modern protestant mentality. It has also produced that Italian characteristic which is at the same time a virtue and a vice—the desire for *Bella Figura* (literally a beautiful face, but which is interpreted in a thousand different ways).

Mr. Kidder Smith has observed with great clarity the results of the Italian preoccupation with *Bella Figura*: what he calls 'Facadism and the Palazzo Complex' in architecture, and the poor interior planning, the ravishing and stimulating exhibitions—no one in Italy thinks that it is a waste to spend large sums of money on these ephemeral constructions any more than they did in the past for elaborate settings for festas and firework displays—and the complete lack of that basic but not very inspiring necessity—good school buildings. None of this has escaped his perspicacious eye, nor the unwillingness of the majority of even the best contemporary Italian architects to make use of the wonderful traditional country and farm house means of construction, which is due to the fact that the Italian ideal is definitely urban and anything which smacks of the countrified and rustic is labelled '*campagnolo*' and as such is regarded as rough and old-fashioned and therefore emphatically not *Bella Figura*. For once the writer has noticed all the external manifestations of a national characteristic without going to the root of the instinct which lies behind it—*Bella Figura*—the preoccupation with the external and the beautiful which are more important to the Italian than the practical considerations of usefulness and comfort.

Given this national characteristic, it is not surprising to find that in contrast to Sweden, where Mr. Kidder Smith noted that modern 'architecture is almost always subordinated to nature and impenetrated by it,' and Switzerland where 'the ideal is the free standing house,' and even low income group terrace houses are 'attractive and well planned for out-of-door living,' the superlative creations of Italian contemporary architecture are of a predominantly urban character—shops, bars, offices, blocks of flats, exhibitions, exhibition halls, factories, stations, and the like. One of the most cheering facts, however, that emerge from Mr. Kidder Smith's comprehensive survey of these high lights of Italy's renaissance is the excellent work in low income group housing which is being carried out in some distressed areas of the south; there are some notable examples of this on the outskirts of Naples and Palermo.

The influence of tradition in a country which contains the painted tombs of Tarquinia and the great mausoleums of Augustus and Hadrian, is also evident in the dignity and beauty of many of Italy's war memorials, that of the Fosse Ardeatine is perhaps the most moving. The lack of inspiring modern

churches provides a strange contrast, especially in a country which is the centre of Catholicism, when compared with the work in this field which has been carried out in France, Sweden and Switzerland—perhaps this is due to the lack of that stimulus which is provided by an effective opposition.

The section which deals with exhibitions and shops is one of the most stimulating in the whole book. It could scarcely be otherwise, as it is in this field that the originality, grace, and daring of Italian contemporary design finds its full expression. The outstanding example of exhibition technique is undoubtedly Ernesto Rogers' 'Architecture is the Measure of Man' at the eighth Triennale. Here the use of that simple, but usually overwhelmingly monotonous, exhibition medium—the photographic panel—is employed with tremendous effect. The same vitality and exuberant gaiety are to be found in many Milanese shop designs, and in a private swimming pool at Monza. According to Mr. Kidder Smith, northern interior decoration is superlative, but he has apparently failed to note how woefully upper crust, in both senses, is good taste in household interiors further south.

The English text of the book is accompanied by an excellent Italian translation, and there is an interesting introduction by Ernesto Rogers. *Italy Builds* should make a stimulating contribution to the enjoyment and understanding of Italy's historic and modern architecture for architects and laymen alike.

Georgina Masson

SHELTER IN SMALL

ENGLISH DOLLS' HOUSES OF THE EIGHTEENTH AND NINETEENTH CENTURIES. By Vivien Greene. Batsford. 63s.

The strange thing about the houses made for dolls is that these ideal clients, requiring neither plumbing, pampering, nor, indeed, material consideration of any kind, should inspire so little fantasy and surprise. One would expect the second half of the eighteenth century to show us a long series of Gothic, Chinese, rococo, singerie, and rustic dolls' houses; conceits that either rivalled the follies and pavilions already in the park, or allowed people who could not afford such embellishments an opportunity at least to have them in little.

Instead, most of the dolls' houses are extremely severe, echoing only the starkest mansions and the simplest cottages. The reason for this can hardly be that the always conservative tastes of the children were studied, for few people studied children's taste in the eighteenth century, and in any case few dolls' houses were made for children.

The architects, carpenters, and men of taste who were concerned with the making of dolls' houses allowed one magnificent opportunity after another to escape them, both outside the houses and within, for the lack of invention in plan and in the ways of opening the houses is most curious. Curious for the eighteenth century that delighted in, for instance, dressing tables that opened and extruded a dozen different trays, drawers, boxes and mirrors at the touch of a hand;

books: casa, piazza—bella figura facing page, left, the spirit of Roman structure continued in a vernacular farm-building near Ferrara; right, the spirit of mediaeval urbanism preserved in the Campo di Siena—both exemplars of design that could well be followed today, within Italy as well as out.

and still more curious for the nineteenth century, when patent furniture of all kinds was so fashionable, elaboration and ingenuity were the breath of life to many people, and both furniture and houses were designed in an infinite number of styles.

When no other book on this enchanting subject exists, it is ungrateful to quibble at Mrs. Greene's large book full of pictures, but so many of the photographs are dull and not sharp enough—the lighting is too flat, and too few of them take one right inside the rooms.

Nos. 127 and 129 have the right quality, so that we can see clearly the terrifying errors in scale of all good dolls' house furniture—a giant's egg cup on a dwarf's table, and the curtains that never hang normally. But it is shocking that there is not even one good photograph in colour; Mrs. Greene evokes admirably in the text the pale, clear emeralds and vermilions, the white and gold interiors, and the heavily painted cream, ochre, or brown fronts, but a colour photograph or two would have helped her a lot.

Clearly many of Mrs. Greene's dates have been established from family records, but some of them seem questionable; if the 'House and Garden' of No. 87 is really late eighteenth century, its designer anticipated normal domestic architecture by some forty or fifty years. But so he may have done; the daring exception to the dull rule of dolls' house designers.

Barbara Jones

WRIGHT ANTHOLOGY

AN AMERICAN ARCHITECTURE. By Frank Lloyd Wright. Edited by Edgar Kaufmann. New York, Horizon Press. \$10.

In spite of his having called Le Corbusier a journalist, because his writings out-bulked his buildings, Frank Lloyd Wright must occasionally feel that the cap would fit himself as well. No other master of the modern movement has talked and written so voluminously, nor for so long, nor—on occasions—so well, about the nature and problems of architecture, and the resultant mass of material (much of it now inaccessible) has long needed sifting and anthologizing. Over the sixty years from 1894 to 1954 covered by the bibliography of this new book, Mr. Wright has wrought the philosophy of his organic architecture, sometimes as an explanation of what he had in mind when executing particular buildings, sometimes in terms of generalized speculation about the relation of the architect to society, structure to materials, man to nature, function to form. His writings are therefore diffuse, variable and self-contradictory when viewed in bulk, but organically related when seen in chronological sequence, the biography of a growing idea.

But Mr. Kaufmann, in editing this anthology has not opted for the sequential and organic approach—as one might have expected from so well-known an admirer of Mr. Wright—but has decided instead to try and reshape the Master's writings into a consistent system, into an orderly and tidy-minded exposition of a theory of Organic Architecture. To achieve this, paragraphs

have been removed from their context, and even from their time-sequence. Thus, on page 47, successive paragraphs—one of only eighteen words—are from 1931, 1894 and 1951, and although the dates are given in the margin, the fact that the quotations are from two lectures given to very different audiences and an article in *Forum*, which obviously slants the tone of voice in which the words were conceived—this information is only to be found at the back of the book. Where large slabs of writing are left intact, as with the five rousing pages on *The Destruction of the Box* of 1914, then Mr. Kaufmann must have our gratitude, but the general effect of compressing together passages of peroration, dark aphorisms and splinters of autobiography is windbaggy and self-congratulatory, a caricature of the quality of Wright when read, or heard, at his own speed and pressure.

Reynier Banham

DECENT RETIREMENT

THE ENGLISH ALMSHOUSE. By W. H. Godfrey. Faber & Faber Ltd. 36s.

An admirable book, and apparently the first historical study of English almshouses: a bit too highly priced for its content, though not for the standard of production. On the whole, the post-Reformation almshouses are pretty buildings with stereotyped plans; the medieval ones are dull buildings with very interesting plans. At one end of the scale there is the simple infirmary-and-chapel, arranged just like a small parish church; at the other the elaborately Renaissance plan of the Savoy, a cross of four wards (three of six bays, the fourth of twelve) with the chapel in the centre visible from each—all carried out in *Vertue-perpendicular*! All this is recorded with the clarity and sureness that can only have come from the careful pruning-away of many times more facts than appear in the present volume.

Particular reflections—(a) the eloquent and beautifully articulated downhill plan of fifteenth century Ewelme, as complex and subtle as any present-day comprehensive school; (b) the extraordinary circular plan of Beamsley Hospital, Yorks, 1593 (alas, no photograph: what on earth must it look like?) 'planned like a miniature Templar's church with a round chapel in the centre, lit by clerestory windows . . .'; (c) that Kirkleatham Hospital chapel is one of the best Gibbs-style buildings in the country.

General reflection: almshouses are not now regarded as an important building type. In view of our age-and-population figures, that seems short-sighted. Old People's Homes form a poor substitute for those who can look after themselves, and here is one sphere where each-little-house-with-a-garden need not mean architectural chaos.

Ian Nairn

DESIGNER-OWNERS.

DAS HAUS DES ARCHITEKTEN. By Robert Winkler. Girsberger, Zurich.

A Swiss publication that introduces us to 44 architects' own houses from 18 countries. In his foreword the author recounts the anecdote told about Professor Saarinen who,

when asked which one of his buildings he liked best, retorted—'the next one.' This curt answer puts the matter in a nutshell and highlights the interesting dilemma of the architect's position as his own client.

Most of the houses chosen suggest that architects are, on the whole, cautious, if not timid, people, which explains why one is disappointed in the results shown. But this should not detract from the value of the publication, as it is worth studying as a document of the last twenty years. In this context it is interesting to observe the dates of birth of the authors and the dates of the buildings.

We are left to wonder whether the exciting impetus given us in the late twenties and the thirties has been lost in the frightening events and consequences of the last war, and we are inevitably drawn to look again at the works of the pre-1910 generation; here we find greater daring and clarity of form. It would therefore have been most instructive to find in the accompanying text the aspirations of the designers stated and their reasons for their solutions.

The book is excellently produced, with four to six pages of text, plans and photographs devoted to each project. The photographs on the whole are of a good standard, but the absence of people is strongly felt and the glimpses of the owners in some of the houses make one immediately feel at home. The book is prefaced by an interesting portrait gallery of the designer-owners, which charmingly omits the birthdate of the only lady represented.

Stefan Buzas

Shorter Notices

FRENCH ARCHITECTURE. By Pierre Lavedan. Pelican. 5s.

This admirable book came out in French in 1944. It has served several generations of students and many an architectural traveller, and Penguins, by making it available to those among these two categories who cannot cope with the French text, have done a highly welcome job. Professor Lavedan's is the best existing summing up of the history of French architecture, concise, competent and not at all hackneyed. He is as good on building materials and historic styles as on such neglected subjects as monastic buildings of the eighteenth century. That his treatment of town and garden planning is masterly need hardly be said. The last pages are a list of brief biographies of all the architects mentioned in the text, complete with references to literature. If only such a book handled in such a way existed for the history of English architecture.

N.P.

Books Received

BURKE STREET. By George Scott Moncrieff. Richard Paterson. 8s. 6d.
ATMOSPHERIC POLLUTION. By A. R. Meetham. Pergamon. 63s.
THE SCOPE OF TOTAL ARCHITECTURE. By Walter Gropius. George Allen & Unwin. 15s.
THE MEDIAEVAL FLOOR TILES OF LEICESTERSHIRE. By Norma R. Whitcomb. Leicestershire Archaeological and Historical Society. 25s.
PEACEFUL USES OF ATOMIC ENERGY, Vol. 13. United Nations. 50s.
RECORD HOUSES OF 1956. Architectural Record.
PICTURE BOOK OF LONDON, PICTURE BOOK OF BRITAIN. Photos by G. F. Allen. Country Life. 15s. each.
LANDSCAPE INTO ART. By Kenneth Clark. Pelican. 5s.
ARCHITECTURAL CONSTRUCTION. By Theodore Crane. Wiley. \$10.00.
SCULPTURE IN EUROPE TODAY. By Henry Schaeffer-Simmern. University of California Press. 64s.

SKILL

A MONTHLY REVIEW

OF BUILDING TECHNIQUES & INDUSTRIAL DESIGN

- 1 interiors
- 2 design review
- 3 techniques
- 4 the industry



1, part of the first floor of the restaurant at Helsinki (see page 267); the design is based on a Karelian farm kitchen.

1 INTERIORS

Good food, well-cooked, say some, is all that should be asked of any restaurant. Given that, no customer should care, or even notice, whether the floor is covered with sawdust or with carpet, whether he sits upon scrubbed wood or upon satin. This is not even a half-truth. Bad food and bad cooking are, it is true, never tolerable, but in eating—as in working or playing, listening to music or making love—the mood is all. A setting that may be alluring one day can be repellent the next when circumstances, climate or the company is different. A wise restaurateur therefore will decide what character his

establishment is to aim at, what class of customer he is trying to attract and how, once attracted, he is to keep his custom. In all this his food, his cooking and his prices must be considered . . . but none of it will bring him success if his designer has failed him. Certain principles are paramount. First, spotless cleanliness in the table appointments—whether damask napery or deal boards—in the glass and crockery, the knives and forks. Ditto in the personal clothing of the serving staff. (Given this, a certain sluttishness is perhaps permissible elsewhere. Cooking is an art, and the best art is never, it seems, produced under impeccably hygienic conditions.) Secondly, lighting that is flattering to food and customer alike—sometimes dim, unobtrusive and intimate, sometimes glittering, festive and spectacular. Thirdly, good background materials, plain or luxurious as appropriate, simply used with touches of richness or brilliance to catch and intrigue the eye.

In both the restaurants illustrated on these pages, these principles of interior design have been properly considered and, although widely differing in scale and in luxury, imaginatively interpreted. In both cases unpainted wood is the principal material used—warm, lively, attractive both to see and to touch, easily maintained and perpetually sophisticated. Simple furniture, pull-down table lights, a few pictures, rugs or flowers for points of interest and the setting—unambitious in one case, frankly theatrical in the other—is achieved.

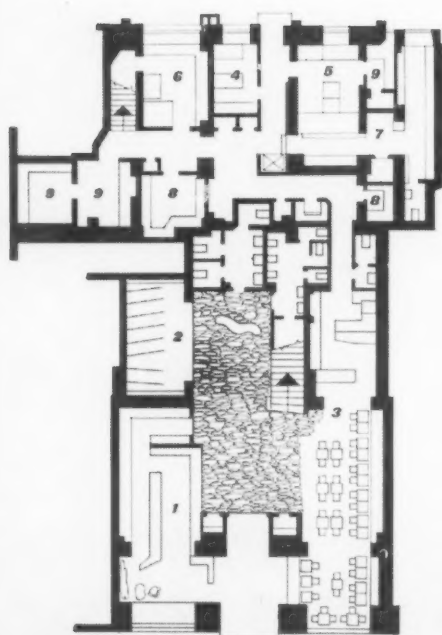
Money has clearly been short in the British example where simplicity dangerously approaches, but stops short of, poverty. In the Finnish restaurant no expense seems to have been spared—even to the rather self-conscious hand-adzing of the beams—in order to recreate in contemporary terms the traditional culture and building methods of eastern Finland. In its superb imaginative control of lighting, and its lively yet sturdy detailing and fittings this restaurant must be counted among the most successful interiors of recent years—as smart, attractive and welcoming today as it was yesterday and will be again tomorrow.

HUGH CASSON

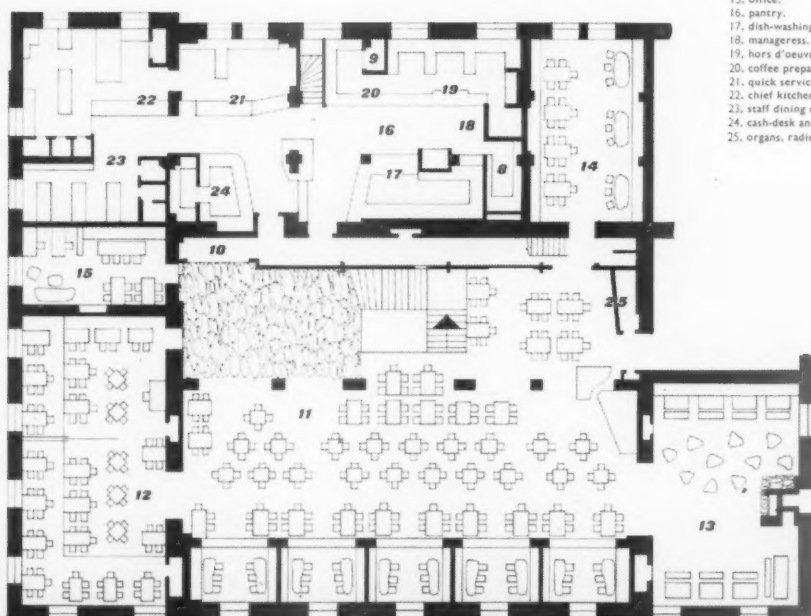
restaurant at Helsinki

key

- 1, Kalevala shop.
- 2, cloakroom.
- 3, lower restaurant.
- 4, trade entrance and telephones.
- 5, laverie.
- 6, bakery.
- 7, staff cloakroom.
- 8, store.
- 9, refrigerators.
- 10, "Court of Louhi."
- 11, "Pohjola room."
- 12, "Marriage room."
- 13, farm kitchen.
- 14, room adjacent to courtyard.
- 15, office.
- 16, pantry.
- 17, dish-washing.
- 18, manageress.
- 19, hors d'oeuvres preparation.
- 20, coffee preparation.
- 21, quick service kitchen.
- 22, chief kitchen.
- 23, staff dining room.
- 24, cash-desk and bar.
- 25, organs, radio, accounts.



ground floor



first floor

0 10 20 30 40
scale of feet

RESTAURANT IN HELSINKI

Architect: Aarne Ervi

In the early part of 1946 the Kalevala Women's Association opened a restaurant in the centre of Helsinki entirely redecorated with the object of reviving certain forms of historic Finnish culture, particularly those derived from the Kalevala (the sagas of the ancient Finnish gods and heroes), survivals of which are still to be found amongst the inhabitants of eastern Finland. A typical example of what the Association wanted to express in the restaurant is the rich wooden architecture, which is preserved, although incompletely, in eastern Finland. The splendid red pines which grow there have a much greater durability than the fir. From this region also come the enormous tree trunks used for the construction of walls, ceilings and furniture.

On the ground floor is a quick-service restaurant. A wide staircase in red wood leads from the entrance hall up to the first (main) floor, where the walls are given the appearance of the outside of a building. The ceiling, painted by G. A. Jysky, shows a starry sky, the stars being represented by symbols from Kalevalan mythology. In the larger upstairs room, a corner is set aside for music and it contains an old wooden organ. At one end of the room is the 'Marriage Room,' which is lighted by chandeliers which symbolize the bridal veil and the snow crystals of Pohjola (the kingdom opposed to that of Kaleva) which slowly melt from the heat given off by the lamps. The 'Marriage Room' is divided in two by sliding doors covered in a fabric composed of plaited straw. The other side of the large room is in the form of a Karelian farm kitchen with its tall 'piirakka' stove for making pastries; the pastries are prepared before the public. On the wall hangs the skin of a fine grizzly bear. The furniture is kept low and on the tables are no cloths, only plaited straw coverings. The light fittings are mainly brass, some being copper. The textiles are plain, in bright red, blues or in dark brown with white stripes. In the lower restaurant is a mottled carpet mural, woven from the white and grey bark of a birch.

The furniture was designed by Maija Taimi, the light-fittings by Paavo Tynell and the textiles by Greta Skogster-Ehtinen. The dresses of the waitresses are copied from eleventh-century models.

2, the quick-service restaurant on the ground floor and the staircase to the left. On the back wall hangs a

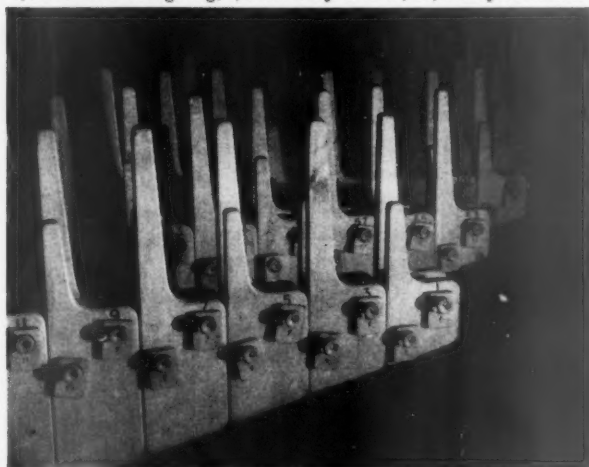
carpet mural. The textile coverings to the seats are red, blue or brown and striped in white. 3, the 'farm kit-

chen' on the first floor. 4, a corner of the same, with the skin of a grizzly bear on the wall. 5, a niche in

the Pohjola room. The wall treatment throughout is meant to suggest the outside of a building.



6, gallery overlooking the 'court of Louhi.' 7, hangers in the cloakroom. 8, the cloakroom. Lighting, 9, in the Pohjola room; 10, in the farm kitchen



7



8

and, 11, in the Marriage room, the intended effect being that of snowflakes, symbolizing the bridal veil and the swans of Pohjola.

6



9



10



12, looking from the street entrance. The wall surfaces and partitions between the irregularly shaped booths are tongued and grooved matchboarding; the photostat panels hang 2 ft. from the original ceiling.



RESTAURANT IN OLD BROMPTON ROAD, S.W.7

Designer: Terence Conran

The exterior of the Chanterelle Restaurant has been left unaltered (its style is Kensington Victorian Gothic) apart from

a new door of tongued and grooved mahogany. All external paintwork is black, white and grey. The client wanted the restaurant to give an instant impression



13

RESTAURANT IN OLD BROMPTON ROAD

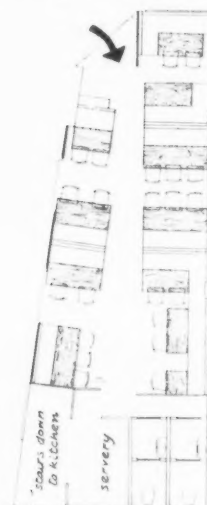


14

13, one of the dining booths, containing banquettes and metal-framed chairs, covered in blue, green, and red tweed. 14, one of the adjustable metal light fittings, common to each booth. 15, typical table service. The specially designed china is decorated with drawings of different fungi. 16, large booth near the servery. 17, the suspended photostat panels of vegetable sections and butterflies.

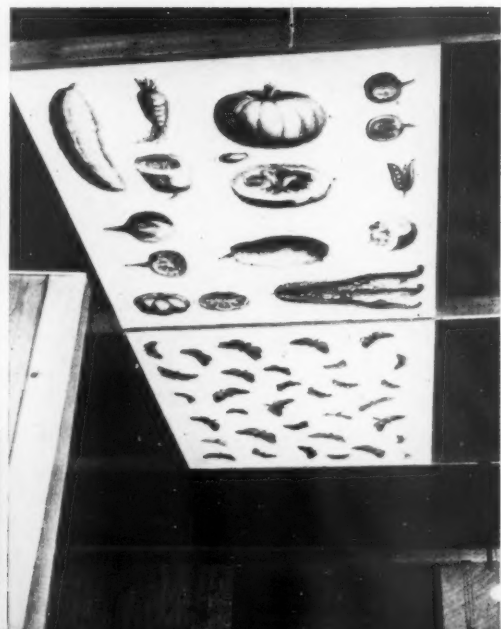


15



to the right of the entrance, which was painted olive, and the part of the end wall containing the cloakroom doors, which was painted light blue. Most of this wall is hidden by a t. and g. screen carrying coat-hooks. A shelf for the display of kitchen utensils is fixed on the t. and g. wall which surrounds the service area, in front of which is a slatted wooden screen. The floor is covered with dull blue coconut matting and the curtains are orange velvet. On either side of a centre aisle are irregularly spaced booths of t. and g. boarding, lined with banquette seating upholstered on 4 in. foam rubber and covered with blue, green and red tweed. A handle is incorporated in the metal framework of the chairs. The tables, of veneered ash, mounted on metal frames are of varying sizes, but all are of the same basic design and are finished in heat-resistant glaze.

Carefully chosen nineteenth-century engravings mounted on olive, light blue, dark grey and scarlet are framed in dull, white wood. The pattern of the china, also specially designed, is based on different fungi, which are a feature of the restaurant, as its name implies.



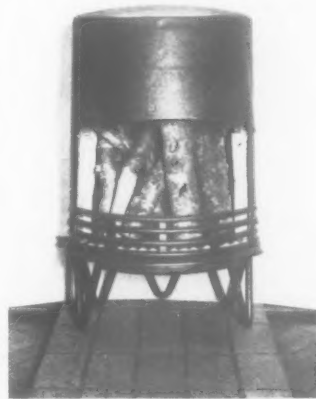
16, 17

2 DESIGN REVIEW

Wood-Burning Stove

Finmar Limited is marketing a cast-iron stove made by H. Rasmussen & Co., of Odense, Denmark. Because wood is not the staple fuel here we have no standard modern design for a wood-burning stove or log basket. In the past, people who wanted to burn wood were content to hark back to the middle ages with blacksmith's basket and fire dogs. Now that the

log fire is a popular feature of modern living rooms architects are continually designing individual fireplaces and log-holders for their clients. Those who have to improvise modern interiors in old houses may find this design, where basket and hood have been incorporated into a single unit, pleasing. Price, approximately, £28, including tax.



1, wood-burning stove by H. Rasmussen & Co., Denmark.

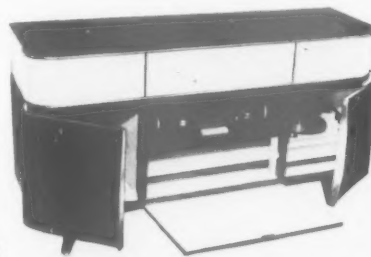
Radio as Furniture

Ideally, radio equipment should be built-in, or at least incorporated in standard unit furniture of the type pioneered by George Nelson for the Herman Miller Company. But at average levels of practicability this can rarely be so, and sound and vision receivers, playing-desks and hi-fi speakers, will have to be dealt with usually as pieces of free-standing furniture. Assimilation into possible furnishing schemes has been blocked hitherto by a tendency to pack large units into predominantly vertical cabinets, which, whether of wardrobe format or kind of *Britannica*-make-it styling merely swore at contemporary furniture with its usually horizontal emphasis.

However, the cabinet-work of standard commercial sets has now taken a less bulky and more horizontal turn that makes assimilation easier. This trend seems to have two foreign sources, outside our native contemporary tradition—'Continental Styling,' mostly from Germany and Italy, and the 'Non-Mechanical Look' from the USA. The former may cause raised eyebrows by virtue of its radiused corners and lavish gold trim, but as Englished in Regentone's giant ARG 150, it can produce conceivable room-furniture, 2. This has in any case a lavish technical specification that justifies its price—over £170—and takes it out of the normal domestic category. The same is

true of the chief representatives of the Non-Mechanical Look at the 1956 Radio Show, 3, hi-fi radiograms by RCA. These technically superlative instruments will now be available in England at a price just short of £200. Their exteriors reveal the dependence of the Non-Mechanical Look on current furnishing norms, and assimilation to other furniture is assisted by the fact that the player desk is available either on legs, as a lowboy, or on a cabinet base that brings it up to the same dimensions as the speaker-box, thus making symmetrical wall-compositions possible.

Equipment of this kind is not likely to feature in many interiors, but TV—even with the 21 in. tube—probably will. The sheer size of these tubes has caused some drastic rethinking among cabinet-stylists, who have almost unanimously opted for an asymmetrical lowboy with a pronounced horizontal emphasis, and tops that level up, near enough, with the thirty-inch datum so often found on today's storage-units, etc. Pye's LB17NF is fairly typical, 4, though it has only a 17 in. tube, while Philco's Model 2160, with the larger screen, is helped in settling down with other furniture by the wooden door that covers the tube face when not in use, 5. On both these models alternative vertical legs would be welcome, though the fact that splay-legs help



2, Regentone ARG 150, 3, hi-fi RCA radiograms at the 1956 Radio Show. 4, Pye 17-in. Lowboy TV receiver. 5, Philco 2160. 6, Philco Trio hi-fi record player. 7, Ferguson 306T, 17-in. TV receiver.

2



3

to sell contemporary furniture on the hire-purchase mass market must be faced, even in the £100 bracket.

This tendency to get equipment well up off the floor on legs affects some smaller sets as well. In the

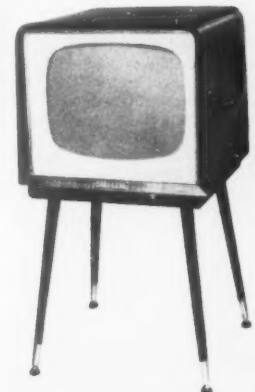
case of small radiograms, like Philco's Trio hi-fi unit, 6, which would normally be ranged alongside chairs, and would probably serve as a kind of surrogate coffee-table for much of its life, assimilation presents no



4, 5



6



7

serious problem, but with TV units, which must stand away from chairs, etc., when in use, the matter is otherwise. The Ferguson 306T, for instance, answers closely to what

has often been advanced as an ideal visual specification, consisting of little beyond the screen and legs. 7, but its vertical format is inevitably assertive, and it might need to be

sited and treated as if it were a piece of sculpture, or the singleton out-of-series chair that is often a focal feature of contemporary interiors.

Hugh Wykeham

3 TECHNIQUES

REMOTE CONTROL GEAR FOR VENTILATORS

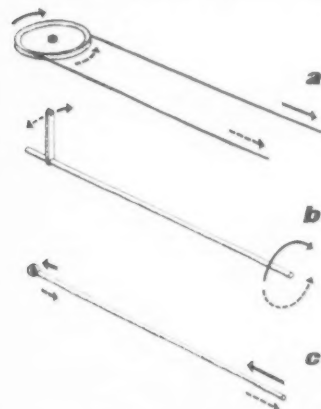
by Robert Maguire

The Bowden cable for transmitting relative motion, which revolutionized the design of bicycle brakes, was invented in the eighteen-nineties. It is said that its inventor was a bed-ridden solicitor who wished to open his front door to friends by remote control. Significantly, despite this first application the cable and its subsequently improved versions were developed exclusively for use in industries other than building: cycles, motorcars and aircraft. Remote control systems for windows and ventilators remained cumbersome combinations of push-rods and cranks—a method essentially unimproved since its early perfection in the actions of medieval organs—for another three decades.

To open and close orthodox opening lights and louvre ventilators, a positive drive in both directions is required. There are three different ways, 1, in which this type of movement may be transmitted mechanically over distances; the twin cable, which produces either straight-line or rotary motion and is subject only to tension; the torque shaft, which produces rotary motion; and the push-pull rod which produces a straight-line motion but must be designed to take both tension and

tension, tending to buckle and bind in the conduit when subjected to compression. Two methods of producing a cable which will transmit

both tension and compression have been invented, and these have been made the basis of push-pull systems for the remote control of ventilators.



1, diagrams of the three methods of transmitting motion mechanically over distances. a, twin cable, b, torque shaft, c, push-pull rod.

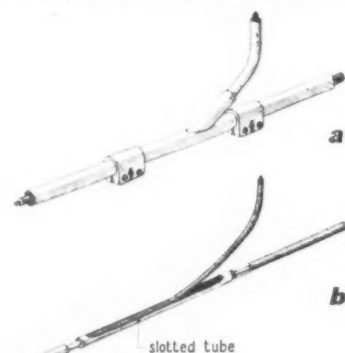
compression. The conversion of rotary to straight-line motion and back again was the principle on which the early control systems relied for the turning of corners. The Crystal Palace louvre controls, 2, show all three transmission methods in sequence. The invention of flexible control cables eliminated the need for converting motion at corners; a smooth and uninterrupted run could be achieved between the operating point and receiving end.

The Bowden cable consists of a multi-strand steel inner cable contained within a flexible steel conduit. Movement of the cable relative to the conduit is transmitted irrespective of either the fixing of the conduit or changes of direction. The limitation of the Bowden type of cable is that the inner cable will work only in

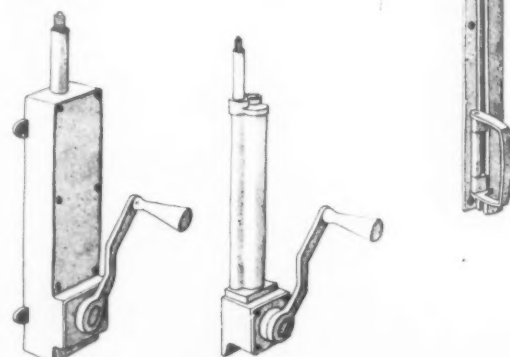
the Arens system



3, the Arens cable, consisting of a multi-strand steel cable running down the centre of a helical spring.



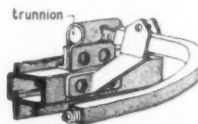
4, the Arens cable and conduit. a, after placing in the conduit, the inner cable is tensioned against the helical spring and the latter is compressed upon itself. This inner assembly then becomes rigid on straight runs but semi-flexible on bends, where it is restrained by the curve of the conduit. b, the conduit is available in square section (3/4 in.) and two sizes of circular section (1/2 in. and 3/8 in.). Inner cable sizes can also be varied for each conduit type according to the load to be taken.



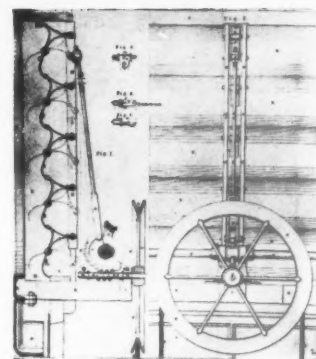
5, junction between main and branch Arens cables. a, the conduit, b, the junction of the inner assemblies. The branch cable emerges from a slotted tube.

7, medium and light duty geared regulators for Arens installations.

6, slide and handle control for small Arens installations.



8, method of applying the thrust of the cable to an opening light. The conduit is bent in a swan-neck and the cable attached to the opening frame by means of a trunnion.



2, the control system for the louvers of the Crystal Palace shows in sequence the three methods of transmitting motion.

By using a Bowden-type cable in twin-cable form, however, a positive drive in both directions can be obtained, and a system using twin-cable gear has recently been developed.

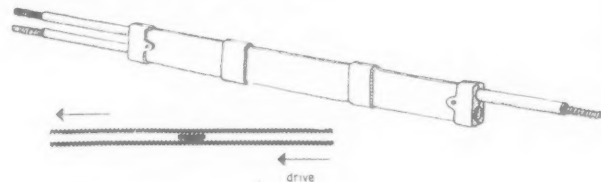
Push-Pull Cable Gear

Arens. The cable invented by the American, Charles Arens, for transmitting compression as well as tension consists of a high-tensile multi-strand steel cable running down the centre of a close-coiled steel spring. 3. This assembly is fitted into a brass or aluminium conduit which is rigid but may be shaped round bends as required, after which the inner cable is tensioned against the spring until

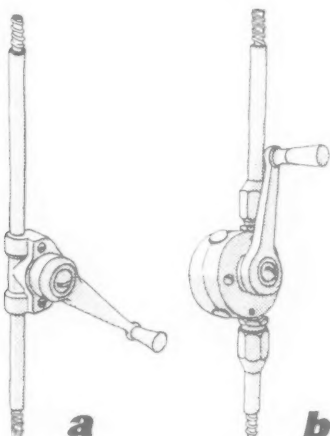
the Teleflex system



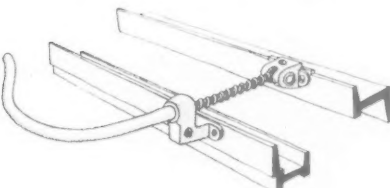
9, the Teleflex cable, consisting of a multi-strand steel cable wound with steel wires of opposing pitch. The larger wire in the outer layer forms a continuous helical "rack" which is used to engage with special gear wheels.



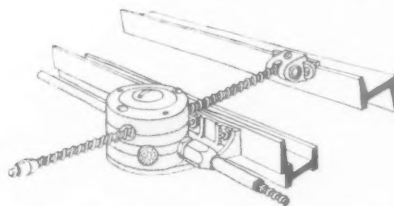
12, the sliding junction for moving a secondary Teleflex cable in the same direction as the driving cable.



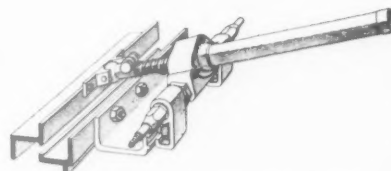
13, two direct-drive operating units for use with small Teleflex installations. a, single-lead unit. b, single- or double-lead unit consisting of a modified double-lead box.



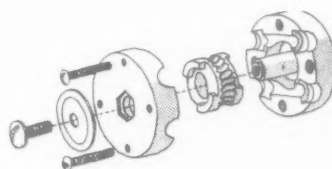
15, swan-neck method of opening ventilators.



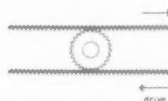
16, method of opening ventilators used when several are connected for simultaneous operation. A double-lead box takes off a branch drive to each ventilator from the main driving cable. An installation of this kind is extremely neat in appearance.



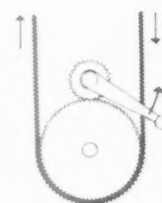
17, a screw jack for opening heavy ventilators. The reduction gear ratio is very high; 7 ft. of cable travel are necessary for 10 in. of opening.



10, the double-lead box, one of the intermediate units of the Teleflex system. The driving cable transmits motion via the gear wheel to the secondary cable.



11, the quadruple-lead box, consisting in effect of two double-lead boxes. Two or three secondary cables may be operated by the driving cable. Unused lead holes are filled by rubber plugs.



14, a geared operating unit for larger Teleflex installations.

the one is in slight tension and the other in slight compression. When the ends are secured to maintain this condition, the cable and spring together form a push-pull rod which is rigid on straight lengths (being, in effect, a prestressed strut) but sufficiently flexible on bends to allow free movement. 4. The cable is supplied in a range of sizes to suit various loading conditions.

In order to operate several vents from one main cable, provision must be made for transferring thrust to branch cables. This is done by replacing a portion of the inner assembly by a slotted tube, 5, into which the end of the branch inner assembly is fixed. At the operating end, the driving force is given to the cable either directly, by means of a slide and handle, or through worm gears operated by a crank handle. The slide and handle, 6, is of course suitable only for single vents up to medium size; for larger installations geared operation is essential and regulators are made in a number of sizes, 7.

At the receiving end, the straight-line motion of the inner assembly

can be used without conversion to do the work of opening the vent. On leaving the conduit the cable assembly is sufficiently rigid not to buckle, and flexible enough to take up the arc required by the swing of an opening light. All that is necessary is to form the conduit into a swan-neck, its end pointing in the direction of opening, 8.

Teleflex. The Teleflex cable consists of a core of high-tensile multi-strand steel cable around which a number of steel wires are wound in layers in such a way that the cable remains flexible. 9. One of the wires in the top layer is of larger diameter than the rest, forming a continuous helical thread. With this construction the cable will not only transmit both compression and tension when housed in a conduit, but can be intercepted at any point to take off a branch drive in the manner of a rack and pinion—the cable being in effect a continuous rack.

There are two sizes of cable, $\frac{5}{16}$ in. and $\frac{1}{2}$ in. in diameter; the smaller has been made the basis of an extremely versatile system which will cope with most complicated require-

ments and all but very heavy installations; for these, the larger cable has been developed.

There are three types of accessories for use with the $\frac{5}{16}$ in. diameter cable; operating units, intermediate units, and receiving units. Intermediate units are for the purpose of transferring drive from one cable to another, but sometimes also form the basis of operating and receiving units. The double lead box, 10, serves one branch cable; the same sections are used to build up the quadruple lead box, 11, which serves three or four branch cables. To produce motion in the same direction as the main cable requires a sliding junction, 12.

If the installation is a small one, the operating unit may be a single-lead direct drive unit or a double-lead box fitted with a handle, 13. For larger installations a geared operator is available, 14, and this is designed to give a better grip on the cable by wrapping it round a large driving wheel.

At the receiving end the ventilator may be operated directly by the cable by means of a swan-neck, 15, but sometimes it may be more

convenient to use a double-lead box, 16, an arrangement which has the advantage of reduced cable friction.

The $\frac{1}{2}$ in. diameter cable gear is intended for serving long runs of industrial vents. It consists largely of units similar to those of the $\frac{5}{16}$ in. cable gear though designed for heavier duty. One departure, however, is a recently introduced receiving unit; a screw-jack for heavy north-light vents, 17. The large gear ratio of these jacks puts less strain on the operating cable.

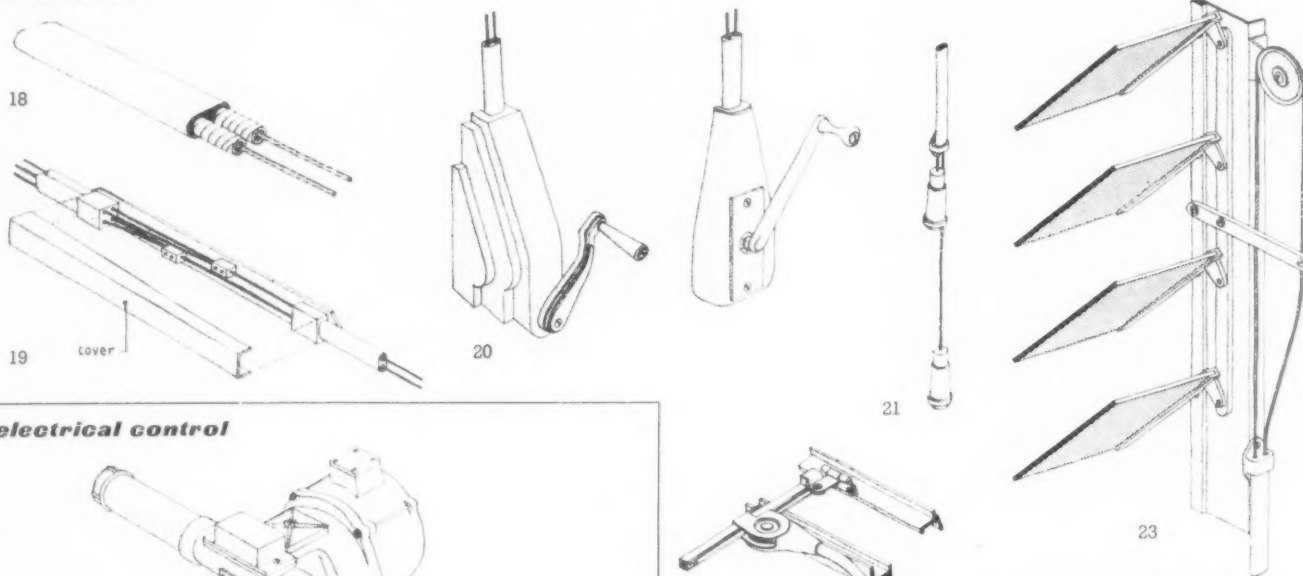
Twin Cable Gear

The twin cable used in this gear consists of two flexible metal conduits covered with a p.v.c. sheath, down the centre of which run high-tensile steel cables, 18. The conduit may be bent to the extremely small radius of 1 in. Branches to secondary cables are achieved by a simple sliding junction, 19.

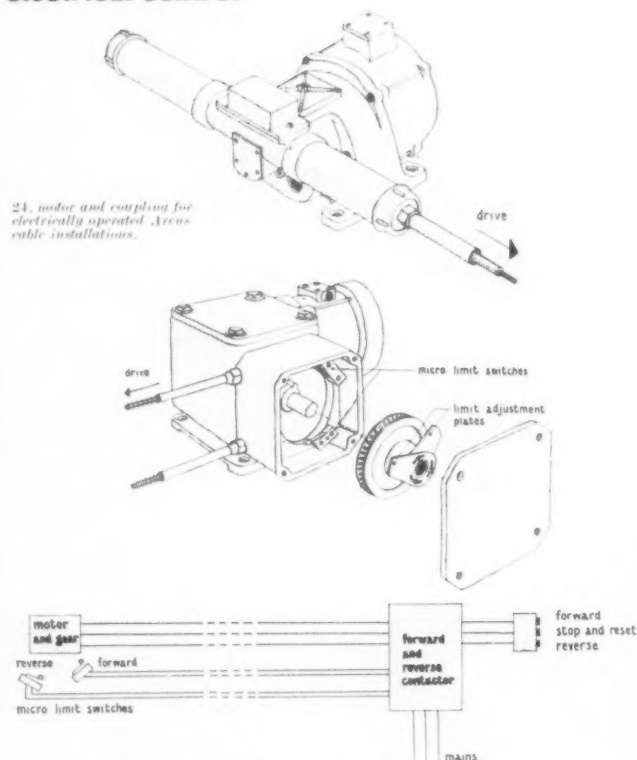
At the operating end direct operation (for small installations) is provided by two pull-handles, 21; there are also two types of geared winches, 20, for larger installations.

For the receiving end a most

twin-cable



electrical control

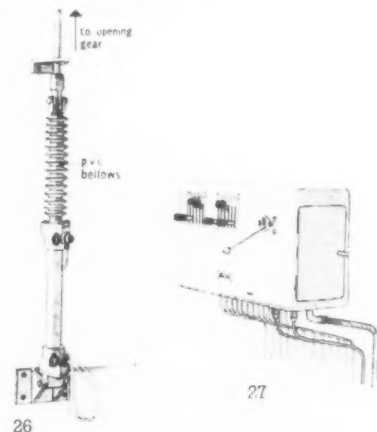


25, motor and coupling for electrically operated Teleflex cable installations.

18, the Arcus twin cable, consisting of two multi-strand steel cables running in flexible tubes and covered with a p.v.c. sheath. 19, sliding junction for Arcus twin cable. 20, two geared winches for larger installations of Arcus twin-cable gear. 21, plastic pull-bands for single-vent installations of Arcus twin-cable gear. 22, the twin-cable opening unit, which locks the ventilator at the end of the closing run. 23, application of twin-cable gear to adjustable louvres.

hydraulic control

26, a hydraulic slave, which may be used to operate any type of local control installation. The slave consists of a cylinder and piston; the exposed piston-rod is covered with a p.v.c. bellows for protection against grit. (Lockheed Industrial Hydraulics Ltd.) 27, a control box for a hydraulic system. The large lever is for main open/close operation; the smaller levers are selectors. Hydraulic pressure is supplied from a central power unit containing electrically driven pumps. This type of control is economical only for very large installations; the example shown is from a power station. (Lockheed Industrial Hydraulics Ltd., in conjunction with Crittall Manufacturing Co. Ltd.)



ingenious unit has been designed, 22, which not only opens and closes the vent but automatically locks it at the end of the closing run. The gear is also simple to attach to adjustable louvres, 23.

Electrical Control

In large buildings where control of ventilation from one central point is desirable, the transmission of the controlling thrust by purely mechanical means over very long distances becomes impracticable. Electrical or hydraulic systems must then be used; these are uneconomical for smaller installations.

For electrical control a motor is installed at the receiving end, which may drive a local installation of cable gear, 24 and 25, or be coupled direct to a torsion shaft. The main push-button control is situated in any convenient central position, and is coupled to a forward and reverse contactor. The switching off of the current in both directions is accomplished by micro-limit switches at the receiving end.

Hydraulic Control

Hydraulic pressure may be used to operate large banks of ganged ventilators by means of the 'hydraulic slave', 26, a cylinder and piston arrangement, coupled either to cable gear or orthodox push-rods. The slaves are connected to control boxes, 27, situated at convenient points, by small-bore tubing. The control boxes accommodate selector valves and a main control valve by which power is applied after selection is made. Power is supplied from a central cabinet containing electrically driven hydraulic pumps.

Correction

In 'Recirculated Warm-Air Heating,' (Techniques: A.R., July 1956) the captions to illustrations 6 and 7, page 64, were reversed, '6' should read '7,' and vice versa. We apologize to readers and to the author for this error.

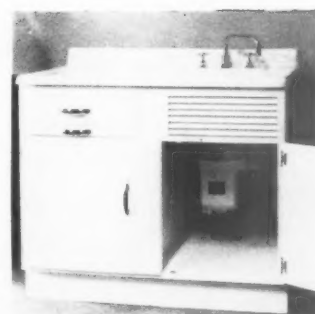
4 THE INDUSTRY

A Food Waste Disposer

One result of the move towards the use of more efficient heat sources is that we are depriving ourselves of a ready means of getting rid of damp household refuse. The old, inefficient stove was in this respect omnivorous. Though the newer slow-combustion stoves will not necessarily go out under a deluge of tea leaves and potato peelings they may well, in digesting them, cause serious condensation and thence damage by sulphates in the flue.

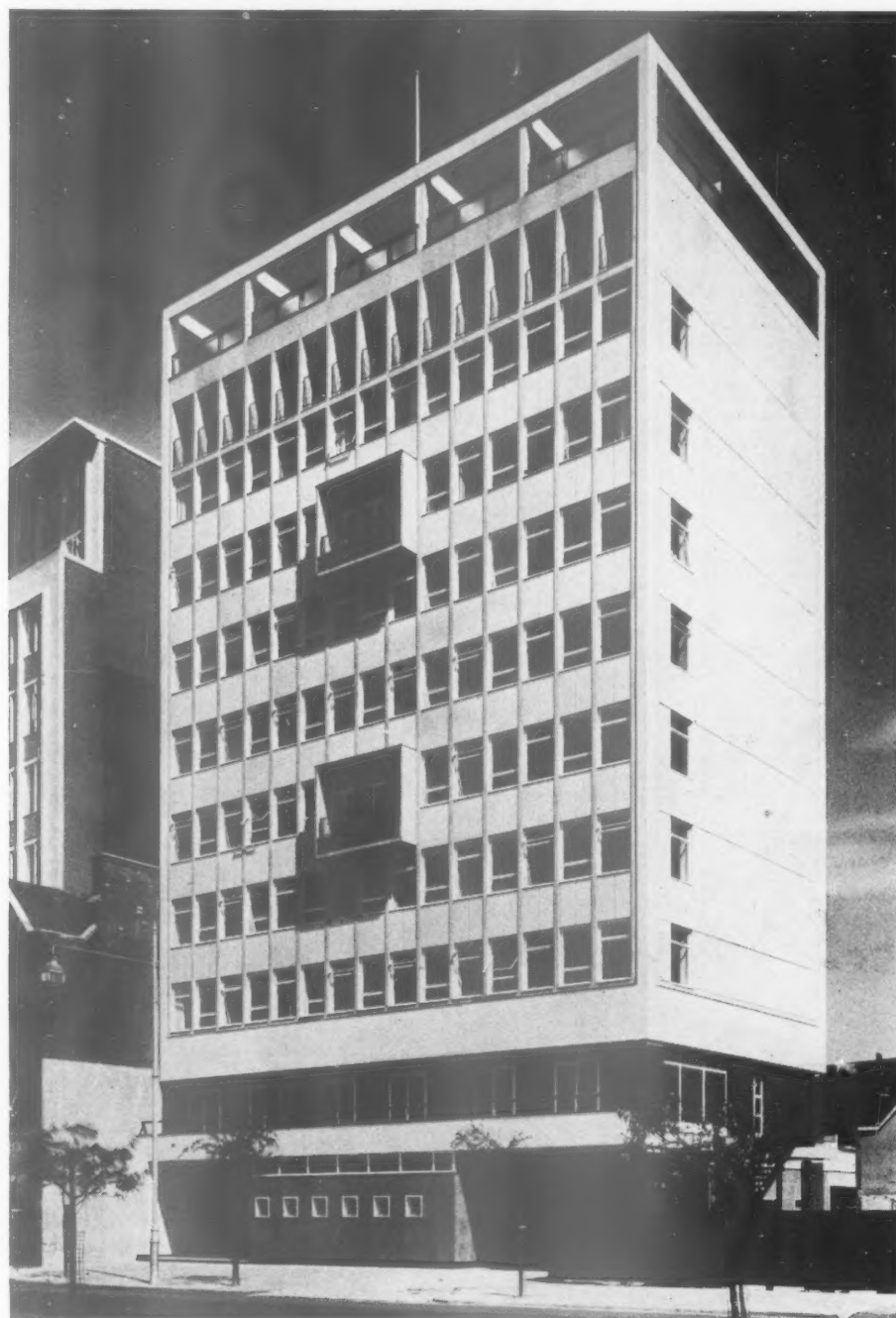
For this reason the case for some sink attachment which will demolish this kind of refuse and make it suit-

Right, the Haigh 'Taccenic.'



[continued on page 276]

HEAD OFFICES FOR NATIONAL DOCK LABOUR BOARD



Architect:
Frederick Gibberd,
C.B.E., F.R.I.B.A., M.T.P.I.

Contractors:
Wates Limited

**SPECIFICATION INCLUDES
FLOOR TILES BY MARLEY**



The Marley Tile Company Ltd., Sevenoaks, Kent. Sevenoaks 55255

continued from page 274]

able for water borne drainage is strong. A new version of this is the Haigh 'Tweeny,' a disposer which can be attached to any sink unit and which sells for £48 4s. (including purchase tax). The motor is fully enclosed, as can be seen in the photograph, and operates from a 13 amp. power supply. The running cost is negligible and the fitting has passed the Good Housekeeping Institute's test for reliability.

The Haigh Engineering Co. Ltd., Ross-on-Wye, Herefordshire.

A Lift Planning Rule

The firm of Marryat and Scott have just issued a very useful little book for architects. It is an up-to-date version of their lift planning rule which was first published twenty years ago. Starting with the population of the building to be served you can find out the different combinations of lift size and speed which will do the job together with the dimensions and loads the architect must allow for. In fact just what he wants to know at the design stage. Obtainable from *Marryat and Scott Ltd., Wellington Works, Hounslow, Middlesex.*

Painting Specifications I

Some architects learnt at school that paint was always composed of a filler, a medium, a vehicle, a base and a pigment; and that the recommended treatment was 9 coats, sandpapered down between each coat. But for real quality, it was rubbed down with the palm of the hand. Since then, painting technique has become both brisker and more complicated; architects are less 'at home' in the subject and more in need of guidance. Two firms* have recently attempted to

provide this in the form of thumb-index handbooks giving recommended treatments on metal, plaster, concrete, woodwork, building boards and old paintwork. Blundell Spence's handbook is more cryptic than Pilchers'—but more up-to-date typographically. Both books put the emphasis on *what* you do, rather than *why* you do it. Neither book is a substitute for a full technical exposition of the subject (Text and Reference Books Committee please note) but they form a useful guide.

* *Painting Specifications. Pilchers Ltd., 6 Chesterfield Gardens, Curzon Street, W.1. Blundell Spence & Co., Ltd., York House, 37 Queen Square, W.C.1.*

Painting Specifications II

Joseph Mason & Co., who (as we reported in July, 1955) made a quick start with the 101 colours, have now produced a book giving architects advice on painting specifications. To be exact it gives actual specifications (related, of course, to the various Mason products) for painting on the different kinds of plaster, cement, metal, wallboard, wood and a rich and terrifying collection of previously treated surfaces. It also gives some good terse general paint specification clauses and notes on the why and the wherefore of paint failures. It should save a lot of anxiety in the office.

Joseph Mason & Co. Ltd., Nottingham Road, Derby.

Clean Air

Architects will soon be much bothered by the Clean Air Bill. Foreseeing this, Radiation Ltd. have published a small booklet entitled 'The Clean Air Act and You,' which

describes the workings of the Act and what householders and other burners of fuel must do to conform to it. The purpose of the Act is to ensure that all fuel users in designated smoke control areas go over to smokeless burning. To make this feasible, local authorities will pay at least 70 per cent of the cost both of new equipment and of consequent builders' work. This grant does not apply to portable equipment and it seems probable that it does not apply to electrical equipment. Normally the changeover will be to some appliance which can burn so-called 'smokeless fuels'; but, as the booklet points out, the ultimate criterion is whether an appliance can burn without making 'any smoke or a substantial quantity of smoke' and this may reasonably include appliances which are able to burn ordinary bituminous coal *smokelessly*. The booklet can be obtained free from *Radiation, Ltd., Stratford Place, London, W.1.*

CONTRACTORS etc

National Dock Labour Board Office.
Albert Embankment, London, S.E.1.

Architect: Frederick Gibberd. *General contractors:* Wates, Ltd. *Nominated sub-contractors:* Automatic telephone alarm; Burog Rentals, Ltd. *Lightning conductor installation:* R. C. Cutting & Co. *Ventilation and heating engineering:* Earley & Noon Heating Co. *Plumbing:* W. H. Earley, Ltd. *Partitions:* Esavian, Ltd. *Rolling shutters:* Haskins, Ltd. *White glazed tiling:* A. H. Herbert & Co. *Lettering:* The Lettering Centre. *Electrical in-*

stallation and alarm: London Electricity Board. *Balustrading externally:* Light Steelwork (1925) Ltd. *Bronze tablet and plaque:* H. H. Martyn & Co. *Lifts:* Marryat & Scott, Ltd. *Terrazzo paving:* Standard Pavements Co. *Canteen equipment:* Summerling & Co. *Metal windows:* Williams & Williams, Ltd. *Open sub-contractors:* *Painting works:* J. W. Alder & Son. *Doors, screens and panels:* D. Burkle & Son. *Colter-lath suspended ceilings:* W. H. Col (London) Ltd. *Asphalt work tanking etc.:* Excel Asphalt Co. *Glazing:* Faulkner Greene & Co. *Paropa floor roofing:* Frazzi, Ltd. *Hardwood hand rail:* E. H. Higginson & Co. *Staircase balustrade:* Light Steelwork (1925) Ltd. *Tiling to floors:* Marley Tile Co. *Hardwood flooring:* Philip Flooring Co. *Granolithic work, plastering, etc.:* W. A. Telling, Ltd. *Fibrous plaster work:* Veronesi, Ltd. *Main entrance doors:* C. E. Westhead, Ltd. *Joinery:* Humphreys, Ltd. *Doors:* J. Glikstein & Son. *Nominated suppliers:* *Industrial steel shelving:* Aerow (Engineers) Ltd. *Grilles:* F. H. Biddle, Ltd. *Prestressed units:* Costain Concrete Co. *Sanitary fittings:* Dent & Hellyer, Ltd. *Safe door:* Milners Safe Co. *Ironmongery:* Parker, Winder & Achurch, Ltd. *Precast cladding and structural members:* Wates, Ltd.

Offices in Bruton Street, London, W.1.
Architect: Cecil H. Elsom. *General contractors:* J. A. Tyler & Sons. *Sub-contractors:* *Piling:* Franki Compressed Pile Co. *Plumbing:* Matthew Hall, Ltd. *Steel:* Somerville Barnard Construction Co. *Hollow pot floors, reinforced concrete, staircases:* Helical Bar & Engineering Co. *Asphalt:* F. J. Prater Asphalt Co. *Hot water and heating:* J. H. Nicholson & Co. *Lightning conductor:* R. C. Cutting &

[continued on page 278]



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Co. *Metal windows and doors*: Monk Metal Window Co. *Marble and external stone-work*: Art Marble Stone Co. *Tiling to lavatories, terrazzo to staircases and rear elevation*: Zanelli, Ltd. *Electrical*: Johnson Pearce, Ltd. *Lifts*: Keighley Lifts. *Hardwood strip and block flooring*: Hollis Brothers, Ltd. *Metal copings to parapet walls*: Builders, Iron & Zincworks, Ltd. *Staircase balustrading*: Haywards, Ltd. *Paropa roofing*: Frazzi, Ltd. *Main entrance doors and screens and ceiling to entrance hall*: F. Sage & Co. *Hardwood handrails*: F. J. Lewis, Ltd. *Sanitary fittings*: Stitsons Sanitary Fittings. *Ironmongery*: Standard Range & Foundry Co.

Offices in Victoria Street, London, S.W.1. *Architect*: Sir John Burnet, Tait & Partners. *General contractor*: Holland, Hannen & Cubitts, Ltd. *Sub-contractors*: *Heating, ventilation and electrical installations*: Engineering Service Installations, Ltd. *Plumbing and drainage*: Matthew Hall, Ltd. *Lifts*: J. & E. Hall, Ltd. *Acoustic ceilings*: Tentest Fibre Board Co. *Asphalt tanking*: Rock Asphalt Co. *Asphalt roofing*: Highways Construction, Ltd. *Bronze work in entrance hall*: G. Johnson Brothers, Ltd. *Fireproof shutters*: Shutter Contractors, Ltd. *Glazed cement finishes*: Robbs Cement Enamel Finishes, Ltd. *Granolithic*: G. T. Bird, Ltd. *Glazing*: Aygee, Ltd. *Kitchen equipment*: Benham & Sons. *Lettering and notices*: The Lettering Centre. *Marble, granite and quartzite*: Fenning & Co. *Metal work and balustrades*: H. & C. Davis, Ltd. *Kingsmill Metal Co.* *Partitions*: Holoplast, Ltd. *Pavement and roof lights*: Haywards, Ltd. *Portland stone*: Damer Bros. *Plastering and fibrous work*: G. J. Green, Ltd. *Roller grilles*: Haskins, Ltd.

Sprinklers: The Automatic Sprinkler Co. *Sprayed asbestos ceilings*: Turners Asbestos Co. *Special furnishings and decorations*: Colourpoint Decorators. *Steel and bronze windows*: Crittall Manufacturing Co. *Terrazzo*: Diespeker & Co. *Telephones (internal)*: Reliance Telephones, Ltd. *Vitrallite*: J. M. Newton & Sons. *Wood block flooring*: The National Flooring Co. *Wall and floor tiling*: Allan & Cairns, Ltd. *Suppliers*: Bricks: R. Y. Ames, Ltd. *Clocks*: The Synchronome Co. *Dome lights*: T. & W. Ide, Ltd. *Door furniture*: Dennis Waring & Co. *Fire fighting equipment*: Merryweather & Co. *Garage turntable*: Francis Theakston (1933) Ltd. *Light fittings*: Courtney Pope, Ltd. *Troughton & Young, Ltd.* *Sanitary fittings*: John Bolding & Co.; Shanks & Co.

Offices in New Cavendish Street, London, W.1. *Architects*: Collins, Melvin Ward & Partners. *General contractors*: Griggs & Sons. *Sub-contractors*: *Piling*: Cementation Co. *Pavement lights*: Lenscrete, Ltd. *Asphalt roofing and paving*: Asphaltic Ltd. *Granolithic paving and terrazzo paving*: Marriott & Price, Ltd. *Adamantine paving*: Harradine & Rouse, Ltd. *Marble wall linings*: Fenning & Co. *Wood block flooring*: Hollis Bros. Ltd. *Ironmongery*: G. & S. Allgood, Ltd. *Entrance hall finishes*: Frederick Sage & Co. *Metal windows, eills and curtain walling*: Williams & Williams, Ltd. *Steel door frames*: Henry Hope & Sons. *W.C. cubicles*: Venesta, Ltd. *Handrails to staircase*: Grundy Arnatt, Ltd. *Roller shutters*: Shutter Contractors, Ltd. *Fibrous plaster pipe casings*: Claridge's (Putney) Ltd. *Colterro suspended lathing*: Scaffolding G.B. Ltd. *Heating installation, hot and cold water services*: Hopes Heating & Engineering.

Sanitary fittings: John Bolding & Sons. *Electrical installation*: A. H. Cornwall & Sons. *Lift installation*: Express Lift Co. *Lightning conductors*: R. C. Cutting & Co. *Roof lights*: T. & W. Ide, Ltd. *Plastic surfacing*: Plastic Surfaces, Ltd.

Offices in Jermyn Street, S.W.1. *Architect*: Sir T. P. Bennett & Son. *General contractor*: F. G. Minter, Ltd. *Sub-contractors*: *Concrete reinforcement*: Twistell, Ltd. *Terrazzo*: Zanelli (London) Ltd. *Lifts*: Waygood Otis, Ltd. *Woodblock flooring*: Vigers Bros. Ltd. *Paneling*: Maples & Co. *Internal and external shop fittings*: Courtney Pope, Ltd. *Artificial stone*: Charinere Products, Ltd. *Heated shoe-room ceiling*: Frenger Ceilings Ltd. *Windows*: Crittall Manufacturing Co. *Asphalt roofing*: Highways Construction, Ltd. *Handrails*: Wood Handrail Co. *Balustrades and ironmongery*: H. & C. Davis & Co. *Portland stone-work*: The South Western Stone Co. *Heating*: G. N. Haden & Sons. *Electrical installation*: The Phoenix Electrical Co. *Waterproof rendering*: Quickset (Watersealers) Ltd. *Slate copings and eills*: Bow Slate & Enamel Co. *Glass bricks*: J. A. King & Co. *Main entrance and hall*: Hilberd Brothers, Ltd. *Marble*: J. Whitehead & Sons. *Flooring*: Armstrong Cork Co. *Prefabricated partitions*: Abix (Metal Industries) Ltd. *Pneumatic tubes*: Lamson Engineering Co. *Vacuum cleaning system*: Sturtevant Engineering Co. *Acoustic treatment*: H. W. Cullum & Co. *Facience and interior tiling*: Carter & Co. (London). *Fibrous plastering*: Clark & Fenn, Ltd. *Fire-proof lift screens*: Evans, Turner & Co. *Trunking*: J. Gardiner & Co. *Suppliers*: *Sanitary ware*: John Bolding & Sons. *Locker baskets*: James Sieber Equipment Co.

Paint: Hadfields (Merton), Ltd. *Strong room*: Chubb & Sons. *Incinerators*: William Sugg & Co. *Light fittings*: General Electric Co. *Fire extinguishers*: The Pyrene Co. *Brick*: Henry J. Greenham (1929) Ltd.

20, Albert Embankment, London, S.E.1. *Architect*: Sir T. P. Bennett & Son. *General contractors*: Taylo Woodrow Construction, Ltd. *Preca columns*: Girlington, Ltd. *Pre-stressed floor planks*: Dow-Mac (Products) Ltd. *Portland stone facing*: Bath & Portland Stone Firms, Ltd. *Steel windows*: Williams & Williams, Ltd. *Artificial stone (externally)*: Girlington, Ltd. *Terrazzo flooring*: Zanelli (London) Ltd. *Marley tile flooring*: Marley Tile Co. *Marble flooring*: J. Whitehead & Sons. *Plumbing*: Structural Services, Ltd. *Electrical installation*: Troughton & Young, Ltd. *Heating, ventilation and hot water installations*: Rosser & Russell, Ltd. *Sanitary fittings*: W. N. Froy & Sons. *Cement glaze and paints*: Quickset Water Sealers, Ltd. *Lifts*: Waygood Otis, Ltd. *Gas installation*: North Thames Gas Board. *Gas incinerators*: Wm. Sugg & Co. *Metal railings*: Clark, Hunt & Co. *Ironmongery*: Yannedis & Co. *Roller shutters*: Shutter Contractors, Ltd. *Clocks*: The Synchronome Co. *Acoustic ceiling*: Clark & Fenn, Ltd. *Lightning conductors*: W. J. Furze & Co.

Sentinel House, Southampton Row, London, W.C.1. *Architects*: Sir T. P. Bennett & Son. *General contractors*: Sir Robert McAlpine & Sons. *Sub-contractors*: *Asphalt roofing*: Ragusa Asphalt Paving Co. *Facing bricks*: W. T. Lamb & Sons. *Artificial stone*: The Empire Stone Co. *Portland stone*: Bath & Portland Stone Firms

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Ltd. Terrazzo work: Zanelli (London) Ltd. **Steel windows:** Crittall Manufacturing Co. **R.C. frames:** Sir Robert McAlpine & Sons. **Plumbing, drainage and rainwater:** Structural Services Ltd. **Heating and ventilation:** Rosser & Russell Ltd. **Electrical:** Merchant Adventurers Ltd. **Sanitary fittings and ironmongery:** Froy Ltd. **Gas installation:** Structural Services Ltd. **Metal railings and balustrading:** Haskins Ltd. **Lightning conductors:** R. C. Cutting & Co. **Paints:** Hadfield (Merton) Ltd. **Marble:** J. Whitehead & Sons. **Flush doors:** Shapland & Petter. **Main entrance doors:** Martyns of Cheltenham. **Glazing:** Faulkner Greene. **Plastering:** Jonathan James. **State cills and copings:** Bow Slate & Enamel Co.

Store at Southampton. Architect: Yorke, Rosenberg & Mardall. **General contractors:** Richard Costain, Ltd. **Sub-contractors:** **Piling:** The Cementation Co. **Asphalt:** The Neuchatel Asphalt Co. **Metal windows:** Williams & Williams, Ltd. **Rolling shutter:** Haskins, Ltd. **Stone:** The Bath & Portland Stone Firms, Ltd. **Doors:** F. Hills & Sons. **Slate:** Setchell & Sons. **Terrazzo:** Diespeker & Co. **Concrete slabbing:** Costain Concrete Co. **Lifts and escalator:** Waygood-Otis, Ltd. **Illuminated signs:** Signcrafts, Ltd. **Ironmongery:** Alfred G. Roberts, Ltd. **Plumbing, drainage and cold water supply:** Richard J. Audrey, Ltd. **Strongroom door:** Chubb & Sons. **Electrical installation:** F. H. Wheeler (Southern) Ltd. **Tiling:** Wiggins Sankey, Ltd. **Sanitary fittings:** Shanks & Co.; Stitsons Sanitary Fittings, Ltd. **Wood strip floors:** R. W. Brooke & Co.; The Acme Flooring & Paving Co. **Heating and ventilating and hot water supply:** Arthur Scull &

Son. Telephone booths: Burgess Products, Ltd. **Roofing:** William Briggs & Sons. **Metal balustrades, staircase:** Clarke, Hunt & Co. **Spiral chute:** Sovex, Ltd. **Suspended ceilings, etc.:** Bracketing, Centering & Lathing, Ltd. **Dome lights:** T. & W. Ide, Ltd. **Fire alarm system:** Associated Fire Alarms, Ltd. **Office partitions:** Compactum, Ltd. **Structural steelwork:** Power's & Deane, Ransome's, Ltd. **Display windows and canopy finishes:** H. N. Barnes, Ltd. **Hairdressing department:** Henry Serventi, Ltd. **Kitchen equipment:** Benham & Sons. **Light steel cladding to escalator:** W. T. Allen & Co. **Rubber flooring:** Cellulin Flooring Co. **Rubber link matting:** Nuway Manufacturing Co. **Painting:** A. Sharrocks, Ltd. **Glazing:** E. A. Hetherington, Ltd. **Joinery:** Golding & Ensell, Ltd.

Library at Rangoon. Architects: Raglan Squire & Partners. **General contractors:** Taylor Woodrow Construction, Ltd. **Sub-contractors:** Plyglass, Ltd.; Thorne & Hoddle, Ltd.; General Electric Co.; Goodlass Wall & Co.; Marryat & Scott, Ltd.; Anselm Odling & Sons.

Airport at Turnhouse, Edinburgh. Architect: Robert H. Matthew. **General contractors:** Nathaniel Grieve. **Sub-contractors:** excavations, damp courses, concrete blocks, bricks, stone: Russell & Swanton. **Foundations and reinforced concrete:** Stuart's Cranio-lithic Co. **Structural steel:** Fleming Bros. **Special roofings:** Aluminium fixed by Patrick Knox & Son. **Roofing felt and roof terrace finish:** Wm. Briggs & Sons. **Partitions (aluminium) and casements:** Williams & Williams Ltd. **Glass:** Cunningham, Dickson & Walker Ltd. **Woodstrip flooring:**

A. M. MacDougall & Son. **Patent flooring (Acotile):** Neuchatel Asphalt Co. **Central heating:** Underhill Heating Engineers Ltd. **Boilers:** Ideal Boilers & Radiators Ltd. **Electric wiring:** James Scott & Co. **Electric light fixtures:** Merchant Adventurers Ltd.; Frederick Thomas & Co. **Special door furniture:** Bell Donaldson & Co. **Door furniture:** Alfred C. Roberts Ltd. **Roller shutters:** Arthur L. Gibson & Co. **Ventilation:** Greenwood & Airvac Ltd. **Plumbing:** Patrick Knox & Son. **Sanitary fittings:** Adamsez Ltd. **Plaster:** Farish & Birnie. **Metal work:** Kingston Brass Co. **'Porcellanite' mosaic to bar:** Supplied by Dennis M. Williams. **Tiling:** R. Campbell & Sons. **Rugs:** R. MacDonald Scott. **Garden furniture:** Metal Developments Ltd.; Conran Furniture. **Furniture (customs seating and garden seating):** Ernest Race Ltd. **(Cane chairs in concourse and customs) for war-blinded. (General):** Hille & Co. **Carpets:** James Templeton & Co. **Shrubs and trees:** Edinburgh Corporation Parks Department. **Planting and seeding:** Air Ministry Works Directorate. **Hand hoists:** Douglas & Bryden Ltd. **Clocks:** E. Baune & Co. **Paints:** T. W. Scott.

House at Mereworth, Kent. Consulting architects: Ramsey, Murray, White and Ward. **General contractors:** J. A. Davison & Son (Builders). **Sub-contractors:** Space heating and domestic hot water: Benham & Sons Ltd. **Electrical installation:** H. T. Barden. **Sliding door gear:** E. Hill Aldam & Co. **Electric light fittings:** The Merchant Adventurers of London Ltd. **Fireplace tiles (living room):** Carter & Co. (London). **Sanitary fittings:** Adamsez Ltd. **Door furniture:**

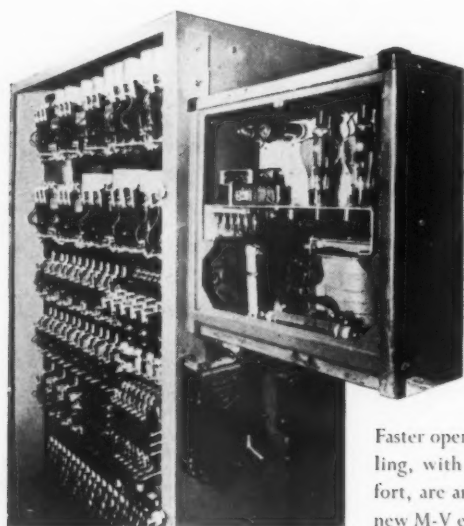
A. G. Roberts Ltd. **Roof covering:** D. Anderson & Son. **Drive works:** Chittenden & Simmons Ltd. **Metal parts for septic tank:** Burn Brothers (London) Ltd. **Cooker:** Aga Ltd. **Windows:** George Jeenings-Hamer (Windows) Ltd. **Acotile floors:** Armstrong Cork Co.

House at Hayes Common, Kent. General contractors: Heal & Son Ltd. **Sub-contractors:** **Roof tiling:** Roberts Adlard Ltd. **Roofing felt:** Kent Asphalt Co. Ltd. **Wall and floor tiling:** A. H. Herbert & Co. Ltd. **Plumbing and heating:** K. Rollinson & Son. **Electrical installation:** S. E. Electricity Board. **Lino flooring:** The Lino Tile Co. Ltd. **Nominated suppliers:**—Metal windows and balustrades: Maclean & Co. (Metal Windows) Ltd. **Doors:** F. Hills & Sons Ltd. **Door furniture:** A. G. Roberts Ltd. **Double glazing:** Plyglass Ltd. **Sanitary fittings:** Stitsons Sanitary Fittings Ltd.

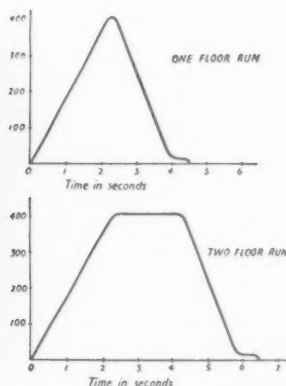
Restaurant in Old Brompton Road, S.W.7. Architect: Terence Conran. **Contractors:** All paintwork: K. & G. Builders. **Electrical installation:** Beaufort Electrical & Engineering Co. **Banquette seating, built-in filaments, wall panelling, etc.:** Conran Contracts. **Furniture:** Conran Furniture. **Light fittings:** Troughton & Young, Ltd. and George Forrest & Son. **China:** Crown Staffordshire China.

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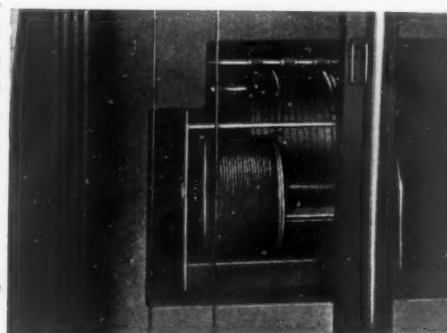
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